TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

MEETING MATERIALS

JUNE 2, 2011

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

Caltrans

BAY AREA TOLL AUTHORITY

STATE OF CALIFORNIA
CALIFORNIA TRANSPORTATION COMMISSION

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Letter of Transmittal

TO: Toll Bridge Program Oversight Committee (TBPOC)

DATE: May 25, 2011

FR: Program Management Team (PMT)

RE: TBPOC Meeting Materials Packet – June 2, 2011

Herewith is the TBPOC Meeting Materials Packet for the June 2nd meeting. The packet includes memoranda and reports that will be presented at the meeting. A Table of Contents is provided following the Agenda to help locate specific topics.

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

Final Agenda

TBPOC MEETING
June 2, 2011 1:00pm – 4:00pm
Caltrans HQ, Director's Conference Room, 1121 N Street, Sacramento
TBPOC-PMT pre-briefing: 1:00pm – 2:00pm
TBPOC meeting: 2:00pm – 4:00pm

	Topic	Presenter	Time	Desired Outcome
1.	**CHAIR'S REPORT**	S. Heminger, BATA	4 min	Information
2.	**CONSENT CALENDAR**			
	a. TBPOC Meeting Minutes:			
	1) May 5, 2011 Meeting Minutes*	A. Fremier, BATA		Approval
	b. Contract Change Orders (CCOs):	D. Noel, CTC		Approval
	1) YBITS No. 1 CCO 10-S3 (Temporary Shoring Enhancements)*			
	2) YBITS No. 1 CCO 509-S1 (Oakland Detour EBMUD Overcrossing Bridge)*			
	3) YBITS No. 1 CCO 526-S0 (Oakland Detour WB Roadway)*			
	4) YBITS No. 1 CCO 529-S0 (Oakland Detour WB Structure)*			
	5) YBITS No. 1 CCO 902-S0, SAS CCO 167-S1 (MEP Light Fixtures)*			
	6) Dumbarton CCO 27-S0 (Welding Modifications)*			
3.	**PROGRESS REPORTS**			
	a. TBSRP First Quarter 2011 Risk Management Update*	J. Tapping, CT	15 min	Information
	b. May 2011 Project Progress and Financial Report**	P. Lee, BATA	1 min	Approval
4.	**PROGRAM ISSUES**			
	a. Demolition Contract***	B. Maroney, CT	30 min	Approval
	b. Architecture Issues (Top of Tower/ Suspender Cable)*	P. Siegenthaler, CT	15 min	Approval
	c. Tour Policy***	B. Ney, CT	10 min	Information
5.	**SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES**			
	a. Self-Anchored Suspension (SAS) Span			
	1) Update	T. Anziano, CT	10 min	Information
	b. Yerba Buena Island Transition Structure (YBITS) No. 1			
	1) Update	T. Anziano, CT	5 min	Information
	2) Fund Allocation*	P. Lee, BATA	10 min	Approval

Topic	Presenter	Time	Desired Outcome
c. Oakland Touchdown No. 2 1) Oakland Detour Update	B. Maroney, CT	5 min	Information
6. EYEBAR UPDATE a. Update*	P. Lee, BATA	10 min	Information
7. ANTIOCH/ DUMBARTON BRIDGE SEISMIC RETROFIT UPDATES a. Update*	M. Forner, CT	5 min	Information
8. OTHER BUSINESS			
Next TBPOC Meeting: July 7, 2011, 10:00 AM – 1:00 PM **Mission Bay Office, 325 Burma Road, Oakland**			

* Attachments
** Stand-alone document included in the binder
*** To be sent under separate cover

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

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TBPOC MEETING
June 2, 2011

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE
CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

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TBPOC MEETING
June 2, 2011

* Attachments
** Stand-alone document included in the binder
*** To be sent under separate cover

ITEM 1: CHAIR'S REPORT

No Attachments

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Andrew Fremier, Deputy Executive Director, BATA

RE: Agenda No. - 2a1

Item- Consent Calendar
TBPOC Meeting Minutes
May 5, 2011 Meeting Minutes

Recommendation:
APPROVAL

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
The Program Management Team has reviewed and requests TBPOC approval of the May 5, 2011 Meeting Minutes.

Attachment(s):
May 5, 2011 Meeting Minutes

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

MEETING MINUTES
May 5, 2011, 11:00am – 1:00pm
Mission Bay Office, 325 Burma Road, Oakland, CA
TBPOC – PMT pre-briefing: 10:00am – 11:00am
TBPOC meeting: 11:00am – 1:00pm

Attendees: TBPOC Members: Steve Heminger (Chair), Malcolm Dougherty (for C. McKim), and Andre Boutros (for Bimla Rhinehart)
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller
Participants: Ade Akinsanya, Brian Boal, Michele DiFrancia, Clive Endress, Mike Forner, John Goodwin, Ted Hall, Steven Hulsebus, Beatriz Lacson, Rick Land, Brian Maroney, Donald MacDonald, Bart Ney, Dina Noel, Mo Pazooki, Zahra Sadat, Bijan Sartipi, Saeed Shahmirzai, Peter Siegenthaler, Jon Tapping, Ken Terpstra, Deanna Vilchek, Mazen Wahbeh, Karen Wang, Jason Weinstein and Mark Woods
Part-Time: ABF - Brian Petersen, Kevin Smith, Bob Kick and Peter van der Waart; MCM – Jim Carter, Harry McGovern and Greg Allen

Convened: 11:14 AM

	Items	Action
1.	**CHAIR'S REPORT** • The Chair announced that Caltrans Director, C. McKim, has attended her last TBPOC meeting. She will be retiring effective May 16, 2011. He welcomed M. Dougherty who is attending his first TBPOC meeting as Caltrans Acting Director.	
2.	**TBPOC MEETING WITH YBITS NO. 1/OAKLAND DETOUR CONTRACTOR, MCM** • M. Forner introduced J. Carter, H. McGovern and G. Allen of MCM Construction, Inc., contractor of the YBITS No. 1 and Oakland Detour projects. He reported that both projects are progressing well. o The YBITS 1 acceleration contract change order (CCO) has been in place since late February 2011.	

	Items	Action
	➢ J. Carter indicated that the project is on schedule and MCM intends to beat the CCO acceleration schedule. o B. Maroney reported that the Oakland Detour eastbound is looking at a Memorial Day 2011 traffic switch. o Discussion items included: SAS and MCM schedule comparison and synchronization, contractor relations/coordination, increased jobsite activity (ground and aerial), site visitors and safety concerns.	• B. Ney to provide a recommendation to the TBPOC on the project tour policy taking into account the increased activity at the jobsite and the attendant safety concerns discussed.
3.	**PRESENTATION OF CABLE ERECTION BY SAS CONTRACTOR, ABF** • B. Petersen of ABF gave a presentation on the Countdown to Cable Erection, covering the various steps and major activities leading to cable erection. o B. Petersen noted that this is a six-month snapshot of activities that will culminate in the cable erection in January 2012. o Discussion topics included: milestones, viewing areas to safely watch significant changes unfold, ongoing fabrication in China, and ABF delivery performance.	
4.	**SFOBB ARCHITECTURAL UPDATE** • C. Endress gave a slide presentation to illustrate the List of Architectural Items across the bridge corridor as follows: 1. Tower Modifications a. Parapet Wall b. Access to Top of Tower c. Tower Suspender Cable 2. Bridge Approaches a. Oakland Touchdown – Landscaping b. Yerba Buena Island – Bridge heads and portal beams c. E1 Re-use	• TBPOC decisions included: o Staff to expedite Item 1 discussions with ABF, develop the corresponding CCO(s) and present Items 1a, 1b and 1c to the TBPOC with cost and schedule data as soon as possible -- in a teleconference, if necessary, or at the TBPOC June 2 meeting. o **APPROVED** the Canary Island date palm tree concept under Item 2a.

	Items	Action
	3. Lighting Design a. Light Fixtures b. Light Pipe 4. Paint Concrete Portions of Bridge/Bikepath 5. Main Cable Conflict –Barrier Modifications 6. Bike Path Architectural Modifications a. Bikepath Conduits at Railing Dividers b. OTD Bikepath Railing Dividers c. Polyester Concrete Surface Repair 7. Safety Railing Modifications – Tower and Crossbeams 8. Crossbeam Traveler Rails o Discussion topics included: Status of the work items, estimated cost and schedule impacts on seismic safety opening, operation/maintenance issues, safety concerns, and coordination with ABF.	o **APPROVED** Items 3a, 6a and 6b as Consent Calendar items 5b6, 5b2 and 5b4 below, respectively. o Staff to provide at the TBPOC July 7 meeting cost and schedule data on the balance of the list.
5.	**CONSENT CALENDAR** a. TBPOC Meeting Minutes 1) April 7, 2011 Meeting Minutes b. Contract Change Orders (CCOs): 1) SAS CCO 139-S1 (Mitigation Incentives), $1,404,543.36 2) SAS CCO 163-S0 (Skyway Pigtails - Electrical), not to exceed $1,850,000 3) SAS CCO 178-S0 (Skyway Bikepath Traveler), $1,573,636 4) SAS CCO 179-S0 (Skyway Bikepath Hand Rail), not to exceed $3,600,000 5) SAS CCO 193-S0 (Skyway Bikepath Expansion Joint), not to exceed $1,300,000 6) SAS CCO 167-S1 (MEP), not to exceed $260,000 and YBITS1 CCO 902 (LED Light Fixtures), not to exceed $13,240,000, for a total not-	• The TBPOC **APPROVED** the Consent Calendar, as presented.

	Items	Action
	to-exceed amount of $13,500,000 7) YBITS1 CCO 509-S1 (EBMUD Overcrossing), not to exceed $250,000 8) YBITS1 CCO 513-S0 (Eastbound Roadway), $2,011,269.20 9) YBITS1 CCO 524-S0 (Westbound Overcrossing), not to exceed $3,500,000 10) Dumbarton CCO 27 (Cross Frame Welding), not to exceed $5,360,000.	
6.	**PROGRAM ISSUES** a. TBSRP 2011 First Quarter Risk Management Update • Not discussed. o J. Tapping handed out the approved 1st Quarter 2011 Risk Management Report and a copy of his Risk Management Briefing presentation to the TBPOC and PMT.	• Reschedule the RM presentation to the TBPOC June 2 meeting.
	b. 2011 First Quarter Project Progress and Financial Update • P. Lee handed out, for TBPOC approval, the latest draft version of the 2011 1st quarter report which incorporates the risk management data missing from the version delivered previously. o Clarifications on YBITS 1 and Oakland Touchdown budgets, Capital Outlay Support forecast, and seismic safety opening date on pages 6 and 7 were provided.	• The TBPOC **APPROVED** the 2011 First Quarter Project Progress and Financial Update, as presented.
	c. The Bay Institute/Friends of One Bay Area • Staff requested TBPOC approval to forward to BATA a request that the agency enter into sole source contracts with The Bay Institute and Friends of One Bay Area regarding East Span Replacement project-related activities, for a cost	• The TBPOC **APPROVED** moving forward with the request to BATA that the agency enter into sole source contracts with The Bay Institute and Friends of One Bay Area, as presented.

	Items	Action
	of up to $1,210,000.	
7.	**SAN FRANCISCO-OAKLAND BAY BRIDGE (SFOBB) UPDATES** a. Self-Anchored Suspension (SAS) Superstructure 1) Update • T. Anziano gave a brief project status report. o Work in China is proceeding well. ➢ All orthotropic box girders (OBGs) are out in trial assembly. b. Yerba Buena Island Transition Structure (YBITS) No. 1 1) Update • See Item 2 above. c. Oakland Touchdown (OTD) No. 2 1) Oakland Detour Update • See Item 2 above.	
8.	**ANTIOCH/ DUMBARTON BRIDGE SEISMIC RETROFIT UPDATES** a. Updates • M. Forner reported on the status of ongoing field work at the Antioch and Dumbarton Bridge Seismic Retrofit projects. o Antioch: The project is progressing well. There is a concern with birds building nests and laying eggs on the structure, which is being mitigated. o Dumbarton: The project is slightly delayed but is expected to catch up when the fabrication stage is completed.	
9.	**OTHER BUSINESS** • N/A	

Adjourned: 1:00 PM

TBPOC MEETING MINUTES
May 5, 2011, 11:00am – 1:00pm

APPROVED BY:

_____ _____
STEVE HEMINGER, TBPOC Chair Date
Executive Director, Bay Area Toll Authority

_____ _____
BIMLA G. RHINEHART, TBPOC Vice-Chair Date
Executive Director, California Transportation Commission

_____ _____
MALCOLM DOUGHERTY Date
Acting Director, California Department of Transportation

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b1

Item- Consent Calendar

Contract Change Orders (CCOs)

Yerba Buena Island Transition Structure (YBITS)1 CCO 10-S3 Temporary Shoring Enhancements

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Recommendation:
APPROVAL

Cost:
CCO 10-S3: $283,475.00

Schedule Impacts:
None

Discussion:

CCO 10-S3 in the amount of $283,475.00 will provide compensation for costs associated with design modifications to the foundation's temporary shoring, and for additional piles to be driven for the two foundations of the YBI Eastbound On-Ramp Structure. The total cost for CCO 10-S0, S1, S2, and S3 amounts to $1,205,665.

CCO 10-S0 and CCO 10-S1 were issued to pay for design changes needed to address the severe slope and geotechnical conditions encountered on site.

As requested by the YBI Coordination Engineer, the design modifications for the temporary shoring will mitigate Department risk associated with constructing the foundations under the severe slope and geotechnical conditions present. A failure of the shoring would have a significant impact on the completion of the project and in turn potentially delay the opening of the new east span of the SFOBB.

Risk Management:
Slope stability is one of the largest risks on the YBITS 1 project. As such, a risk allowance of $5M-$10M has been set aside under Risk No. 22.

Attachment(s):

1. CCO 10-S3: CCO & CCO Memo
2. CCO 10-S3 History: CCO & CCO Memo 10-S0, 10-S1 & 10-S2

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 10	Suppl. No. 3	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Force Account:

Furnish and transport to the project site 55 each W14x120 or HP14X117 steel piles for Bent W8 and W9 of the YBI EB On-Ramp Structure necessary to provide for the enhanced shoring specifications incorporated under the original Change Order No. 10 as determined by the Engineer.

All materials furnished under this change order shall be the property of the Department.

Estimated cost of Extra Work at Force Account $200,000.00

Extra Work at Lump Sum:

Compensate the Contractor for all additional costs in the handling and driving of the 55 each W14x120 or HP14X117 steel piles for Bent W8 and W9 of the YBI EB On-Ramp Structure due to the enhancements incorporated into the approved design as provided for under the original Change Order No. 10.

For these costs, the Contractor shall be compensation an agreed lump sum $83,475.00. Except for the procurement of the 55 each steel piles as defined herein, this lump sum constitutes full and final compensation, including all markups, for all additional costs incurred.

Compensation provided herein is based on the 55 each steel piles being left in place. In the event the removal of these piles is ordered by the Engineer, the Contractor shall be compensated for the cost of the removal.

Estimated cost of Extra Work at Lump Sum $83,475.00

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with Section 8-1.07, "Liquidated Damages", of the Standard Specifications and Section 10-1.22 " Progress Schedule (Critical Path Method)" of the Special Provisions.

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 10	Suppl. No. 3	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

Estimated Cost: **Increase** ☑ **Decrease** ☐ **$283,475.00**

By reason of this order the time of completion will be adjusted as follows: Deferred

Submitted by

Signature	Resident Engineer	Date
	William Howe, Senior R.E.	

Approval Recommended by

Signature	Principal T.E.	Date
	Mike Forner	

Engineer Approval by

Signature	Principal T.E.	Date
	Mike Forner	

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM /	FILE: **E.A.** 04 - 0120S4
FROM: William Howe, Senior R.E.	**CO-RTE-PM** SF-80-12.7/13.2
	FED. NO. NO FED AID
CCO#: **10** SUPPLEMENT#: **3** Category Code: **CDSA**	CONTINGENCY BALANCE (incl. this change) **$69,779,820.50**
COST: **$283,475.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: SHORING ENHANCEMENTS	**PROJECT DESCRIPTION:** YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	**DEF** Day(s)	**0** Day(s)	**0** %	**8**

THIS CHANGE ORDER PROVIDES FOR:

Compensating the contractor for furnishing and driving additional steel piles for the YBI EB On-Ramp structure associated with the enhanced shoring specifications incorporated under the original Change Order No. 10.

This project, the Yerba Buena Island Transition Structure (YBITS), provides for the construction of two bridges which will connect eastbound and westbound traffic on the new east span of the San Francisco Oakland Bay Bridge (SFOBB) to the existing Yerba Buena Island (YBI) tunnel. The structures are comprised of concrete box girder bridges each approximately 40 meters high and 450 meters in length.

The project includes the construction of 11 footings, as large as 15.5 meters long, 12 meters wide and 3.5 meters deep, that will be constructed along a steep hill approximately 40 meters in height. The slope of this hill exceeds 1 to 1 in many locations and is comprised of loose sand. The original Change Order No. 10 provided for an increased design specification for earthquake loading of the temporary shoring required to construct these foundations to a minimum seismic acceleration of 0.20g. Mike Whiteside the YBI Coordination Engineer requested the change.

Consistent with the minimum design standard established, the placement of additional steel piles are being requested for the 2 foundations associated with the YBI EB On-Ramp structure that is being constructed adjacent to the mainline structure. The work includes furnishing and driving 55 each W14x120 or HP14X117 steel piles. The piles shall be located on the uphill side of the shoring for the 2 foundations and will act to relieve the overburden on the shoring for these foundations.

The original Change Order No. 10 was approved by Head Quarters Construction with the cost anticipated not to exceed $950,000. This cost didn't anticipate enhancements being required for the YBI EB On-Ramp Structure. Consistent with the prior supplements to this change order, compensation for furnishing the piles will be paid as extra work at force account with the costs of handling and driving the piles being compensated at an agreed lump sum price.

The costs associated with the actual installation of the 55 piles shall be compensated as extra work at an agreed lump sum of $83,475.00. Additional funding for the procurement of the steel piles shall be provided as extra work at force account at an estimated cost of $200,000.00. The total change order cost of $283,475.00 shall be financed from the contract's contingency funds. A cost estimate is on file.

Adjustment of contract time is deferred as the work may affect the controlling operation.

Maintenance concurrence is not required as this change affects a temporary structure and doesn't affect any permanent roadway features.

CONTRACT CHANGE ORDER MEMORANDUM

CONCURRED BY:		
Construction Engineer:	William Howe	Date
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:	Bob Zandipour	Date
Project Manager:	Ken Terpstra	Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):		Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue_Approve) By:		Date
Resident Engineer's Signature:		Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$200,000.00	$800,000.00
AGREED PRICE	$83,475.00	$405,665.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$283,475.00	$1,205,665.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☑ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 10	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Replace Subsection "TEMPORARY SHORING" of Section 10-1.45 "EARTHWORK" of the Contract Special Provisions as shown on Page 2 of this change order.

Any additional costs resulting from this change order are deferred and shall be compensated under a supplement to this change order.

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with Section 8-1.07, "Liquidated Damages", of the Standard Specifications and Section 10-1.22 " Progress Schedule (Critical Path Method)" of the Special Provisions.

Estimated Cost: Increase ☐ Decrease ☐ **$0.00**

By reason of this order the time of completion will be adjusted as follows: Deferred

Submitted by

Signature	Resident Engineer	Date
Rajesh Oberoi	Rajesh Oberoi, Senior R.E.	9/20/10

Approval Recommended by

Signature	Area Construction Manager	Date
Deanna Vilcheck	Deanna Vilcheck	9/20/10

Engineer Approval by

Signature	Area Construction Manager	Date
Deanna Vilcheck	Deanna Vilcheck	10/21/10

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date
	EDMUNDO A. PUCHI, TREASURER	10/5/10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DATE: 9/20/2010 Page 1 of 2

TO: Deanna Vilcheck, ACM /	FILE: E.A. 04 - 0120S4
FROM: Rajesh Oberoi, Senior R.E.	CO-RTE-PM SF-80-12.7/13.2
	FED. NO. NO FED AID

CCO#: 10	SUPPLEMENT#: 0	Category Code: CDSA	CONTINGENCY BALANCE (incl. this change)	$29,055,812.00
COST: $0.00	INCREASE ☐ DECREASE ☐		HEADQUARTERS APPROVAL REQUIRED?	☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED:	$0.00		IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS?	☑ YES ☐ NO

CCO DESCRIPTION: REVISED SPECIFICATIONS FOR TEMPORARY SHORING

PROJECT DESCRIPTION: YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (Including this change)
1390 Day(s)	DEF Day(s)	0 Day(s)	0 %	0

THIS CHANGE ORDER PROVIDES FOR:

Replacing the temporary shoring specification from the special provisions to provide for an increased seismic acceleration design standard.

This project, the Yerba Buena Island Transition Structure (YBITS), provides for the construction of two bridges which will connect eastbound and westbound traffic on the new east span of the San Francisco Oakland Bay Bridge (SFOBB) to the existing Yerba Buena Island (YBI) tunnel. The structures are comprised of concrete box girder bridges each approximately 40 meters high and 450 meters in length.

The project includes the construction of 11 footings, as large as 15.5 meters long, 12 meters wide and 3.5 meters deep, that will be constructed along a steep hill approximately 40 meters in height. The slope of this hill exceeds 1 to 1 in many locations and is comprised of loose sand. Mike Whiteside the YBI Coordination Engineer has issued a request to increase the design for earthquake loading of the temporary shoring required to construct these foundations to a minimum seismic acceleration of 0.20g. This change order provides for this design revision.

This requirement was intended to be included in the contract special provisions but was mistakenly omitted. The increased design standard will mitigate risk associated with constructing these foundations under the severe slope and geotechnical conditions present.

This change order incorporates this increased design standard for the temporary shoring into the contract. Compensation for the additional costs resulting from this change is deferred and shall be compensated under a forthcoming supplement to this change order. Costs associated with this change will include grading to relieve overburden material and increase temporary shoring members.

This change is being issued with deferred compensation in order to proceed with the temporary shoring design in a timely manner and mitigate potential delay to the contract completion. The cost of this change is not anticipated to exceed $950,000.

Adjustment of contract time is deferred as the change may affect the controlling operation.

Maintenance concurrence is not required as this change affects a temporary structure and doesn't affect any permanent roadway features.

CONCURRED BY:		
Construction Engineer:	Rajesh Oberoi RO	Date 10/21/10
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:		Date
Project Manager:		Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):		Date
Other (specify):	Mike Whiteside (Co ordination Engi	Date 5/12/10
District Prior Approval By:		Date
HQ (Issue Approve) By:	LARRY SALHANEY	Date 09/21/10
Resident Engineer's Signature:	Rajesh Oberoi 10/21/10	Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$0.00	$0.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$0.00	$0.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 10	Suppl. No. 1	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Force Account:

Furnish all additional materials at Bent W8R, W8L, W9R and W9L (south column only) necessary to provide for the enhanced shoring specifications incorporated under the original Change Order No. 10 as determined by the Engineer.

All materials furnished under this change order shall be the property of the Department.

Estimated cost of Extra Work at Force Account $450,000.00

Labor and equipment costs associated with the actual installation and removal of the additional shoring materials are deferred.

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with Section 8-1.07, "Liquidated Damages", of the Standard Specifications and Section 10-1.22 " Progress Schedule (Critical Path Method)" of the Special Provisions.

Estimated Cost: Increase ☑ Decrease ☐ **$450,000.00**

By reason of this order the time of completion will be adjusted as follows: Deferred

Submitted by			
Signature Rajesh Oberoi	Resident Engineer Rajesh Oberoi, Senior R E	Date 1/24/11
Approval Recommended by			
Signature Deanna Vilcheck	Area Construction Manager Deanna Vilcheck	Date 1/24/11
Engineer Approval by			
Signature Deanna Vilcheck	Area Construction Manager Deanna Vilcheck	Date 2/9/11

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by		
Signature	(Print name and title) EDMUNDO A. PUCHI, TREASURER	Date 2/4/11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DATE: 1/14/2011 Page 1 of 2

TO: Deanna Vilcheck, ACM /	FILE: E.A. 04 - 0120S4
FROM: Rajesh Oberoi, Senior R.E.	CO-RTE-PM SF-80-12.7/13.2
	FED. NO. NO FED AID
CCO#: 10 SUPPLEMENT#: 1 Category Code: CDSA	CONTINGENCY BALANCE (incl. this change) $22,135,099.00
COST: $450,000.00 INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: $0.00	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: REVISED SPECIFICATION FOR TEMPORARY SHORING	PROJECT DESCRIPTION: YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	DEF Day(s)	0 Day(s)	0 %	6

THIS CHANGE ORDER PROVIDES FOR:

Furnishing all additional materials necessary to provide for the enhanced shoring specifications incorporated under the original Change Order No. 10.

This project, the Yerba Buena Island Transition Structure (YBITS), provides for the construction of two bridges which will connect eastbound and westbound traffic on the new east span of the San Francisco Oakland Bay Bridge (SFOBB) to the existing Yerba Buena Island (YBI) tunnel. The structures are comprised of concrete box girder bridges each approximately 40 meters high and 450 meters in length.

The project includes the construction of 11 footings, as large as 15.5 meters long, 12 meters wide and 3.5 meters deep, that will be constructed along a steep hill approximately 40 meters in height. The slope of this hill exceeds 1 to 1 in many locations and is comprised of loose sand. The original Change Order No. 10 provided for an increased design specification for earthquake loading of the temporary shoring required to construct these foundations to a minimum seismic acceleration of 0.20g. Mike Whiteside the YBI Coordination Engineer requested the change.

The design of this enhanced shoring has now been completed and this change order provides for the additional materials resulting from this enhanced design to be furnished. The major portion of the design enhancements provides for 2 rows of steel H piles to be driven uphill from the functioning sheet pile shoring. Some increases to the sizing of the actual shoring may also be provided. Five separate footings are affected by this change at four bent locations.

Labor and equipment costs associated with the actual installation of the H piles and other enhancements are deferred and shall be compensated under a supplemental change order. This change order is being processed in order to provide timely delivery of the added materials which will help to mitigate Department delays associated with the design enhancements.

The costs associated with furnishing the additional materials shall be compensated as extra work at force account at an estimated cost of $450,000.00 which shall be financed from the contract's contingency funds. A cost estimate is on file.

The total cost of this change including the deferred labor and equipment installation costs is not anticipated to exceed $950,000.

Adjustment of contract time is deferred as the change may affect the controlling operation.

Maintenance concurrence is not required as this change affects a temporary structure and doesn't affect any permanent roadway features.

CONCURRED BY:		
Construction Engineer:	Rajesh Oberoi	Date 1/24/11
Bridge Engineer:	for Mehran Ardakanian OK	Date 2/9/11
Project Engineer:		Date
Project Manager:	KEN TERPSTRA	Date 02/14/11
FHWA Rep.:		Date
Environmental:		Date
Other (specify):	Mike Whiteside (Coordination Eng)	Date 5/12/10
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:	SEY HOSNIEH	Date 1/24/11
Resident Engineer's Signature:	Rajesh Oberoi 1/24/11	Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$450,000.00	$450,000.00
AGREED PRICE	$0.00	$0.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$450,000.00	$450,000.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☑ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 10	Suppl. No. 2	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Force Account:

Provide additional funds for furnishing materials as specified under Change Order No. 10, Supplement No. 1 and as defined under this change order.

All materials furnished under this change order shall be the property of the Department.

Estimated cost of Extra Work at Force Account $150,000.00

Extra Work at Lump Sum:

Compensate the Contractor for all additional costs in the construction and design of the temporary shoring at Bent W8R, W8L, W9R and W9L (south column only) for the Westbound and Eastbound Structures (Br. No. 34-0006 L) due to the enhancements incorporated into the approved design as provided for under the original Change Order No. 10. Compensation includes but is not limited to all costs associated with driving additional piles and installing and removing additional bracing and supports.

For these costs, the Contractor shall be compensation an agreed lump sum $322,190.00. Except for the procurement of added shoring materials as defined herein, this lump sum constitutes full and final compensation, including all markups, for all additional costs incurred pertaining to all enhancements incorporated into the temporary shoring.

Materials to be compensated on a force account basis shall be defined by the 3 items listed below:

1) HP 14 x 117 steel piles to relieve overburden above the shoring.
2) WF 14 x 211steel beams to strengthen shoring walls
3) 48-inch diameter steel pipe piles 1-inch in thickness to relieve overburden above the piles

The cost of all other miscellaneous materials to be furnished shall be considered to be included in the lump sum compensation provided under this change order and no additional compensation shall be paid.

Compensation at force account shall provide for the procurement and shipment of materials to the project site. All unloading and handling costs associated with the materials shall be considered as included in the lump sum compensation provided under this change order and no additional compensation shall be paid.

Compensation provided herein is based on the HP 14x117 steel piles being left in place. In the event the removal of these piles is ordered by the Engineer, the Contractor shall be compensated for the cost of the removal.

This change order provides full compensation for all costs deferred under the original Change Order No. 10.

Cost of Extra Work at Lump Sum $322,190.00

A determination of the delay in the completion of the Contract due to this change order, the original Change Order No. 10 and Change Order No. 10, Supplement No. 1 has been made in accordance with the provisions of Change Order No. 72. There shall be no time extension as a result of these change orders.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 10	Suppl. No. 2	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

RK

Estimated Cost: Increase ✔ Decrease **$472,190.00**

By reason of this order **the time of completion** will be adjusted as follows: 0 days

Submitted by		
Signature Rajesh Oberoi	Resident Engineer Rajesh Oberoi, Senior R.E.	Date 04/1/11
Approval Recommended by		
Signature Deanna Vilcheck	Area Construction Manager Deanna Vilcheck	Date 4/6/11
Engineer Approval by		
Signature	Area Construction Manager Deanna Vilcheck	Date

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by		
Signature	**(Print name and title)**	**Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM

FROM: Rajesh Oberoi, Senior R.E.

FILE: E.A. 04 - 0120S4
CO-RTE-PM SF-80-12.7/13.2
FED. NO. NO FED AID

CCO#: 10 SUPPLEMENT#: 2 Category Code: CDSA

CONTINGENCY BALANCE (incl. this change) $5,861,878.50

COST: $472,190.00 INCREASE ☑ DECREASE ☐

HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO

SUPPLEMENTAL FUNDS PROVIDED: $0.00

IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO

CCO DESCRIPTION:
Shoring Enhancements

PROJECT DESCRIPTION:
YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	0 Day(s)	0 Day(s)	0 %	7

THIS CHANGE ORDER PROVIDES FOR:

Compensation to the contractor for all costs associated with the enhanced shoring specifications incorporated under the original Change Order No. 10.

This project, the Yerba Buena Island Transition Structure (YBITS), provides for the construction of two bridges which will connect eastbound and westbound traffic on the new east span of the San Francisco Oakland Bay Bridge (SFOBB) to the existing Yerba Buena Island (YBI) tunnel. The structures are comprised of concrete box girder bridges each approximately 40 meters high and 450 meters in length.

The project includes the construction of 11 footings, as large as 15.5 meters long, 12 meters wide and 3.5 meters deep, that will be constructed along a steep hill approximately 40 meters in height. The slope of this hill exceeds 1 to 1 in many locations and is comprised of loose sand. The original Change Order No. 10 provided for an increased design specification for earthquake loading of the temporary shoring required to construct these foundations to a minimum seismic acceleration of 0.20g. Mike Whiteside the YBI Coordination Engineer requested the change.

The design of this enhanced shoring has now been completed and Change Order No. 10, Supplement No. 1 provided funding for additional materials resulting from this enhanced design to be furnished. This change order will provide additional funding to furnish these materials and compensation for the installation of these materials into the shoring. The major portion of the design enhancements provides for 2 rows of steel H piles to be driven uphill from the functioning sheet pile shoring at Bents W8 and W9. Addition bracing within the shoring walls will also be provided. Five separate footings are affected by this change at four bent locations.

Labor and equipment costs along with miscellaneous materials associated with the actual installation of the H piles and additional bracing shall be compensated as an agreed lump sum price. Additional funding will also be provided for the major material procurements provided for under Change Order No. 10, Supplement No. 1. These materials are defined under this change order as the 3 major components required to be furnished. All other miscellaneous materials are compensated under the agreed lump sum price.

The costs associated with the actual installation of the H piles and additional bracing shall be compensated as extra work at an agreed lump sum of $322,190.00. Additional funding for the material procurement shall be provided as extra work at force account at an estimated cost of $150,000.00. The total change order cost of $472,190.00 shall be financed from the contract's contingency funds. A cost estimate is on file.

No adjustment of contract time shall be granted as specified under Change Order No. 72 which acted to mitigate any delay associated with this change.

Maintenance concurrence is not required as this change affects a temporary structure and doesn't affect any permanent roadway features.

CONCURRED BY:	
Construction Engineer: Rajesh Oberoi	Date 4/1/11
Bridge Engineer:	Date 4/4/11
Project Engineer:	Date
Project Manager:	Date
FHWA Rep.:	Date
Environmental:	Date
Other (specify):	Date
Other (specify):	Date
District Prior Approval By:	Date
HQ (Issue Approve) By:	Date
Resident Engineer's Signature: Rajesh Oberoi	Date 4/1/11

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$150,000.00	$600,000.00
AGREED PRICE	$322,190.00	$322,190.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$472,190.00	$922,190.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b2

Item- Consent Calendar
Contract Change Orders (CCOs)
Yerba Buena Island Transition Structure (YBITS) 1 CCO #509-S1 – Oakland Detour EBMUD Sewer Outfall Overcrossing Revisions

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Recommendation:
APPROVAL

Cost:
CCO #509 - S1: $50,023

Schedule Impacts:
None

Discussion:

CCO #509-S1 for a total amount of $50,023 will supplement CCO #509- S0 issued for $996,441 to construct the EBMUD sewer outfall overcrossing. The additional funding will compensate the contractor for work that had to be performed around unidentified utilities, will cover costs associated with design modifications to provide anti-washout admixture for use in the concrete mix, and will pay for imported aggregate base rock used for structural backfill.

Risk Management:

This change order is part of the overall Oakland Detour that was approved by the TBPOC on February 3, 2011 at an overall cost of approximately $51,000,000. The budget provided $690,000 to construct the overcrossing. The EBMUD crossover bridge was constructed to mitigate the risk of damaging the sewer outfall pipe (Risk #2060 in the Project Risk Register). During the crossover bridge construction, several identified risks occurred: additional unidentified utilities were encountered (Risk #1120.1), dewatering efforts exceeded the planned work (Risk #1300), and differing site conditions were encountered (Risk #2040). The cost of the proposed contract change order is well within the total of $800,000-$4,500,000 identified to cover these risks.

Attachment(s):

1. CCO & CCO Memorandum 509-S1
2. CCO 509-S0

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 509	Suppl. No. 1	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Lump Sum:

Provide anti-washout admixture for use in concrete mix. If field conditions allow the concrete to be placed without requiring the admixture, and the admixture shall become the Department's property and will be used as determined by the Engineer.

The agreed price constitutes full payment, including all markups, for this change.

Cost of Extra Work at Lump Sum $50,023.00

Estimated Cost: **Increase** ☑ **Decrease** ☐ **$50,023.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature	Resident Engineer	Date
William Howe	William Howe, Senior R.E.	05-09-11

Approval Recommended by

Signature	Construction Manager	Date
Michael T Forner	Mike Forner	5/10/11

Engineer Approval by

Signature	Construction Manager	Date
	Mike Forner	

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM /	FILE: **E.A.** 04 - 0120S4
FROM: Rajesh Oberoi, Senior R.E.	**CO-RTE-PM** SF-80-12.7/13.2
	FED. NO. NO FED AID
CCO#: **509** SUPPLEMENT#: **1** Category Code: **BZZZ**	CONTINGENCY BALANCE (incl. this change) **$79,054,609.60**
COST: **$50,023.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: OTDD- EBMUD overcrossing revisions	**PROJECT DESCRIPTION:** YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	**0** Day(s)	**0** Day(s)	**0** %	**7**

THIS CHANGE ORDER PROVIDES FOR:

This change order provides funds to compensate the Contractor for additional work as required to construct an overcrossing bridge of the EBMUD Sewer outfall, in the vicinity of the Oakland Touchdown Detour (OTDD).

This contract calls for the construction of the Yerba Buena Island Transition structures of the east span of the new San Francisco Oakland Bay Bridge (SFOBB). In a memo dated October 3, 2010, the Deputy Toll Bridge Program Manager recommended to the Toll Bridge Program Oversight Committee (TBPOC) that the Temporary OTD Eastbound Detour be done under Contract Change Orders. This recommendation was approved by the TBPOC in their October 7, 2010 meeting. Subsequently, a Contract Change Order Implementation Strategy was approved with a working budget of $51,000,000 for the construction work.

The proposed OTD Detour includes CCO 509, construction of a bridge to cross over the EBMUD sewer outfall pipe, that is being constructed for an agreed CCO price of $996,441. After construction began, the excavation was found to have a large inflow of groundwater, and Caltrans engineering recommended that the design be modified as follows:

Provide anti-washout admixture for use in concrete mix. If field conditions allow the concrete will be placed without requiring the admixture, and the admixture will become the Department's property and will be used as determined by the Engineer.

The work will be paid for as Extra work at agreed lump sum for a cost of $50,023.00, which shall be funded from the contract's contingency fund. A cost estimate is on file.

Total cost for this change order + supplements will be $1,046,464.00.

This change order is approved by the Toll Bridge Oversight Committee (TBPOC) in their May 05, 2011 meeting.

No adjustment of contract time is warranted, as this change will not affect the controlling operation.

Maintenance concurrence is not required, as this work does not affect any permanent features.

CONCURRED BY:		
Construction Engineer:	William Howe	Date
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:	Jaime Gutierrez	Date
Project Manager:	Ken Terpstra	Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):		Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:	Larry Salhaney	Date
Resident Engineer's Signature:		Date
William Howe		05-09-11

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$50,023.00	$1,046,464.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$50,023.00	$1,046,464.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☑ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 509 **Suppl. No. 0** **Contract No 04 - 0120S4** **Road** SF-80-12.7/13.2 **FED. AID LOC.:** NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Lump Sum:

Compensate the Contractor for the construction of EBMUD Sewer Outfall Pipe Crossover Bridge, per attached specification (Sheet 03 of 11) and drawings (Sheets 04 through 11of this change order). Compensation includes but is not limited to all costs associated with furnishing labor, equipment, material , shoring system, structural excavation, structural backfill, structural concrete, bar reinforcing steel, structural steel, miscellaneous metal, and timber decking.

For this work the Contractor shall be compensated an agreed lump sum amount of $996,441.00, which constitutes full and final compensation for all additional costs incurred, including all markups, for the above mentioned work.

The agreed price excludes the following items

1. Installation of barriers (K Rail or other).
2. AC paving, striping, markers.
3. All sign and electrical work.
4. Relocation or replacement of any existing utilities or obstacles and any hand excavation or other methods required to preserve such obstacles.
5. Identification, testing and removal of any hazardous or contaminated material.
6. Purchase and hauling of imported backfill material.
7. Cost associated with SWPPP measures.
8. Costs associated with dewatering the excavation and any storage, treatment, testing or disposal of water generated from the dewatering operation.
9. Any nesting bird surveys that might take place within the migratory bird-nesting season (February 1st to August 31st) and any other studies required.
10. Removal of cross-over bridge.
11. Shoring system for the south abutment excavation (the price is based on open cutting and sloping of this excavation).

The Contractor shall submit a Critical Path Schedule for the work. The schedule shall be updated each week. The Contractor shall complete the work within 30 calendar days after commencement. Time extensions for this work will be granted in accordance with SSP 10-1.22 Progress Schedule (Critical Path Method) subsection Time Impact Analysis. In addition if the Contractor's work is impacted due to weather as defined in Standard Specification 8-1.06 Time of Completion, a time extension for completion of this work will be granted.

Cost of Extra Work at Lump Sum $996,441.00

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 509	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

Estimated Cost: Increase ☑ Decrease ☐ **$996,441.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature	Resident Engineer	Date
Rajesh Oberoi	Rajesh Oberoi, Senior R.E.	03/30/11

Approval Recommended by

Signature	Area Construction Manager	Date
Deanna Vilcheck	Deanna Vilcheck	3/30/11

Engineer Approval by

Signature	Area Construction Manager	Date
	Deanna Vilcheck	

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b3
Item - Consent Calendar
Contract Change Orders (CCOs)
YBITS1 CCO 526-S0 - Oakland Detour Westbound Roadway

Recommendation:
APPROVAL

Cost:
Not to Exceed $6,100,000

Schedule Impacts:
N/A

Discussion:
YBITS1 Change Order No. 526-S0 in the **not-to-exceed amount of $6,100,000** will provide for the construction of the westbound roadway items for the Oakland Detour. The work includes the construction of the grading, base rock, AC paving, drainage pipes, barriers, and associated traffic control.

This change order is being issued in order to complete the roadway portion of the work. A separate change order shall be issued for the superstructure work once the final plans are issued.

Risk Management:

The $6,100,000 in funding being requested falls within the amount budgeted for this work under the Oakland Detour budget approved by the TBPOC on February 3, 2011. Therefore, it is not carried as a risk item on the Risk Management Plan.

Attachment(s):
1. Draft YBITS1 CCO 526-S0
2. Draft YBITS1 CCO 526-S0 Memo

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 526	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Construct the Oakland Touchdown Detour Eastbound Roadway, per attached drawings (Sheets x through y of this change order) as follows:

X-1 Dated 5/20/11, L-1 Dated 5/20/11, L-2Dated 5/20/11, L-3 Dated 5/20/11, PS-1 Dated 5/20/11, D-1 Dated 5/20/11, D-2 Dated 5/20/11, D-3Dated 5/20/11, DP-1 Dated 5/20/11, DP-2 Dated 5/20/11, DP-3Dated 5/20/11, DD-1Dated 5/20/11, DD-2 Dated 5/20/11, DD-3 Dated 5/20/11, DQ-1 Dated 5/20/11, DQ-2 Dated 5/20/11, U-1Dated 5/20/11, U-2 Dated 5/20/11, U-3 Dated 5/20/11, U-4Dated 5/20/11, U-5 Dated 5/20/11, CS-1Not dated, SC-1 Not dated, SC-2 Not dated, SCQ-1Not dated, PD-1 Dated 5/20/11, PD-2 Dated 5/20/11, PD-3 Dated 5/20/11, PDQ-1 Dated 5/20/11, S-1 Dated 5/20/11, Q-1 dated 5/20/11

Extra Work at Unit Price:

1 Mobilization for this portion of the work 1 LS@$ xx =$yy

2 Remove concrete barrier (type 60 or 60SC -- does not include type K barriers) M @$xx =$yy

3 Roadway Excavation M3 @$xx = $yy

4 Cold plane AC Pavement M2 @$xx = $yy

5 Class 3 Aggregate Base M3 @$xx =$yy

6 Hot Mix AC (Type A) Tonne @$xx =$yy

7 Hot Mix AC (Open Grade) Tonne @$xxx =$yy

8 Sawcut and trim AC for Barrier installation M @$xx =$yy

9 Remove Culvert M @$xx =$yy

10 Remove Inlet EA @$xx =$yy

11 Minor concrete (minor structure) M3 @$xx =$yy

12 Miscellaneout Iron and steel KG @$x =$yy

13 450 MM slotted CSP M @$x =$yy

14 450 MM plastic pipe M @$xxx =$yy

15 600 MM plastic pipe M @$xxx =$yy

16 Concrete Barrier (Type 60SC) (including reinforcing bar) M @$xxx =$yy

17 Crash Cushion Modules Each @$500.00 =$7,000.00

18 Mainline I-80 Lane Night Closure (When Labor Rates are paid at straight time -- Monday through Friday night into Saturday AM; 8 hour maximum closure) Each @$3,325.00 =$133,000.00

19 Mainline I-80 Lane Night Closure (When Labor Rates are at time and one-half -- Saturday night to Sunday AM; 8 hour

CONTRACT CHANGE ORDER Change Requested by: Engineer

CCO: 526	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

maximum closure) 2 Each @$4,319.00 =$8,638.00

20 Mainline I-80 Lane Night Closure (When Labor rates are Double time -- Sunday night to Monday AM or Holiday to following day; 8 hour maximum closure) 1 Each @$5,161.00 =$5,161.00

21 Extending Mainline I-80 Lane Closure: Additional hours (When Labor rates are at Time and One-Half)
20 Hours @$422.00 =$8,440.00

22 Extending Mainline I-80 Lane Closure: Additional hours (When Labor rates are at Double Time)
20 Hours @$528.00 =$10,560.00

The unit price for excavation includes the cost of hauling and disposal of existing AC and base, and providing a water truck as required for dust control during removal operations. The price also assumes that there is no reinforcing fabric in the existing AC, and excludes the cost of dump fees for the disposal of existing AC that contains reinforcing fabric. The unit price for excavation includes the cost of preparing the subgrade, but excludes the removal, recompaction or replacement o any soft areas encountered.

Any soil to be excavated that is identified as potentially contaminated soil shall be stockpiled by the contractor at a location adjacent to the site. Any further work with such stockpile(s) is excluded from the agreed price. The agreed price excludes the identification, handling, removal or testing of any hazardous or contaminated material, which will be paid for under a separate change order.

The unit price for cold plane AC pavement includes the cost of hauling and disposal of grindings, and providing a water truck as required for dust control during this operation.

The agreed price excludes the cost of dewatering the excavation, or storage, treatment, testing or disposal of any water generated from a dewatering operation.

The agreed price excludes roadway striping, pavement markers, and signs, and electrical, which will be paid for under a separate change order.

The agreed price includes setting the drainage items to finish grade as shown on the drawings, but the agreed price excludes the removal, relocating or replacement of any survey monuments, resetting of manholes or other items to grade.

The agreed unit prices for lane closures include the labor, equipment and materials as required to close one, two or three lanes in one direction (Eastbound or Westbound Interstate 80) as determined by the Engineer.

Access will be maintained at all times to the EBMUD facilities and PG & E facilities that are located at the western end of the maintenance access road.

The agreed price excludes relocating, removing or installation of barrier rails (Type K or other), which will be paid for under a separate change order.

The price excludes the cost of any SWPP measures, such as SWPPP amendments and reports, and appropriate Best Management Practices (BMPs), which will be paid for under a separate change order.

The Contractor shall provide a Critical path method schedule for this change order work, in accordance with SSP 10-1.22 Progress Schedule (Critical Path Method). The schedule shall be updated weekly.

The agreed price excludes quality control and quality assurance costs for the AC mixes.

The agreed prices include all labor, equipment and material as required. The agreed prices constitute full payment, including all markups, for this change.

The agreed price anticipates that the work will be completed by October 31, 2011.

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 526	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

Adjustment of Compensation at Unit Price:

For the Hot Mix Asphalt (type A and Open grade) included above as part of this change order, the compensation payable for asphalt binder used in hot mix asphalt will be increased or decreased in conformance with the provisions of Section 5-1.06, "Compensation Adjustments for Price Index Fluctuations" of the Special Provisions, for asphalt binder price fluctuations exceeding 10 percent adjustment. The baseline index "Ib" used in this calculation shall be 586.3, which was the California Statewide Paving Asphalt Price Index for the month of March 2011.

Cost of Adjustment of Compensation for Price Index Fluctuations, at Agreed Unit Price (increase)…... $5,000

Total CCO: $ NOT TO EXCEED 6,100,000.

Estimated Cost: Increase ☑ **Decrease** ☐ **$6,100,000.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature	Resident Engineer	Date
	William Howe, Senior R.E.	

Approval Recommended by

Signature	Construction Manager	Date
	Mike Forner	

Engineer Approval by

Signature	Construction Manager	Date
	Mike Forner	

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM /	FILE: **E.A.** 04 - 0120S4
FROM: William Howe, Senior R.E.	**CO-RTE-PM** SF-80-12.7/13.2
	FED. NO. NO FED AID
CCO#: **526** SUPPLEMENT#: **0** Category Code: **BZZZ**	CONTINGENCY BALANCE (incl. this change) **$0.00**
COST: **$6,100,000.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: OTDD- Westbound Roadway	**PROJECT DESCRIPTION:** YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	**0** Day(s)	**0** Day(s)	**0** %	**7**

THIS CHANGE ORDER PROVIDES FOR:

This change order provides compensation to the contractor for costs to construct the Oakland Touchdown Detour Westbound Roadway, per drawings (Sheets x through y of the change order). The work includes grading, base rock, AC Paving, drainage pipes, barriers, and associated traffic control.

This contract calls for the construction of the Yerba Buena Island Transition structures of the east span of the new San Francisco Oakland Bay Bridge (SFOBB). In a memo dated October 3, 2010, the Deputy Toll Bridge Program Manager recommended to the Toll Bridge Program Oversight Committee (TBPOC) that the Temporary OTD Eastbound Detour be done under Contract Change Orders. This recommendation was approved by the TBPOC in their October 7, 2010 meeting. Subsequently, a Contract Change Order Implementation Strategy for $51.5 Million was prepared and approved by the TBPOC in their February 3, 2011 meeting. The work involved in this change order was included as line items in the approved budget for the strategy.

Compensation for this work shall be paid at agreed unit prices, plus an amount set aside as extra work at force account. This CCO provides funding for an estimated cost of $NOT TO EXCEED $6,100,000. This will be funded from the project's contingency fund. A cost analysis is on file.

No adjustment of contract time is warranted, as this change will not affect the controlling operation.

This change was requested by Jaime Gutierrez, Branch Chief, Office of Toll Bridge design, on xx/xx/xxxx.

Maintenance concurrence is required, as this work may affect permanent features.

CONCURRED BY:		
Construction Engineer:	William Howe	Date
Bridge Engineer:		Date
Project Engineer:	Charles Ho	Date
Project Manager:	Ken Terpstra	Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):	Philip Harsono, Maintenance	Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue _Approve) By:	Larry Salhaney	Date
Resident Engineer's Signature:		Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$6,100,000.00	$6,100,000.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$6,100,000.00	$6,100,000.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE PERCENT

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b4
Item - Consent Calendar
Contract Change Orders (CCOs)
YBITS1 CCO 529-S0 - Oakland Detour Westbound Structure – Substructure and Superstructure

Recommendation:
APPROVAL

Cost:
Not to Exceed $8,000,000

Schedule Impacts:
None

Discussion:
YBITS1 Change Order No. 529-S0 in the **not-to-exceed amount of $8,000,000** will provide for the construction of the westbound substructure and superstructure of the Oakland Detour. The work includes installing reinforcing bar, structural concrete walls and slabs, erecting steel beams, steel barrier, and other items as required.

This change order is being issued in order to complete the structural portion of the work. Separate change orders shall be issued for the foundation work and roadway work.

Risk Management:

The $8,000,000 in funding being requested falls within the amount budgeted for this work under the Oakland Detour budget approved by the TBPOC on February 3, 2011. Therefore, it is not carried as a risk item on the Risk Management Plan.

Attachment(s):

1. Draft YBITS1 CCO 529-S0
2. Draft YBITS1 CCO 529-S0 Memo

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 529	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Construct the Oakland Touchdown Detour Westbound Structure—Substructure and Superstructure, per attached drawings (Sheets x through y of this change order) as follows:

X-1, X-2, S-1 through S-80; Y-1 through Y-40.

Extra Work at Unit Price:

1 Mobilization for this portion of the work 1LS @$ xx = $yy.00

2 STRUCTURAL CONCRETE, BRIDGE M3 @$ xx.00 =$yy.0

3 STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N) M2 @$ xx.00 = $yy.00

4 Deck drains Each @ $xx.00 =$yy.00

5 CONCRETE BARRIER (TYPE 732 MODIFIED) M@$ xxx.00 =$yy.00

6 Bar Reinforcing Steel (Bridge) KG @$xx.00 = $yy.00

7 Minor concrete (minor structure) M3 @$xx.00 =$yy.00

8 Miscellaneout Iron and steel KG @ $x.00 =$yy.00

9 FURNISH STRUCTURAL STEEL (BRIDGE) KG @$x.00 =$yy.00

10 ERECT STRUCTURAL STEEL (BRIDGE) KG @ $xxx.00 =$yy.00

11 MISCELLANEOUS METAL (BRIDGE) KG @$xxx.00 = $yy.00

The agreed unit prices do not include lane closures or traffic control, which will be pair for under a separate change order.

The agreed price excludes relocating, removing or installation of barrier rails (Type K or other), which will be paid for under a separate change order.

The price excludes the cost of any SWPP measures, such as SWPPP amendments and reports, and appropriate Best Management Practices (BMPs), which will be paid for under a separate change order.

The agreed prices include all labor, equipment and material as required. The agreed prices constitute full payment, including all markups, for this change.

The agreed price anticipates that the work will be completed by xx/xx/xxxx.

Estimated cost of Extra Work at Agreed Unit Price .....….$ NOT TO EXCEED 8,000,000.00

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 529	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

Estimated Cost: **Increase** ☑ **Decrease** ☐ **$8,000,000.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature	Resident Engineer	Date
	William Howe, Senior R.E.	

Approval Recommended by

Signature	Construction Manager	Date
	Mike Forner	

Engineer Approval by

Signature	Construction Manager	Date
	Mike Forner	

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM /	FILE: **E.A.** 04 - 0120S4
FROM: William Howe, Senior R.E.	**CO-RTE-PM** SF-80-12.7/13.2
	FED. NO. NO FED AID
CCO#: **529** SUPPLEMENT#: **0** Category Code: **BZZZ**	CONTINGENCY BALANCE (incl. this change) **$0.00**
COST: **$8,000,000.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: OTDD- WB Substructure/ Superstructure	**PROJECT DESCRIPTION:** YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	**0** Day(s)	**0** Day(s)	**0** %	**7**

THIS CHANGE ORDER PROVIDES FOR:

This change order provides compensation to the contractor for costs to construct the Oakland Touchdown Detour Westbound Structure – Substructure and Superstructure, per drawings (Sheets x through y of the change order). The work includes installing reinforcing bar, structural concrete walls and slabs, erecting steel beams, steel barrier, and other items as required to complete the bridge structure.

This contract calls for the construction of the Yerba Buena Island Transition structures of the east span of the new San Francisco Oakland Bay Bridge (SFOBB). In a memo dated October 3, 2010, the Deputy Toll Bridge Program Manager recommended to the Toll Bridge Program Oversight Committee (TBPOC) that the Temporary OTD Eastbound Detour be done under Contract Change Orders. This recommendation was approved by the TBPOC in their October 7, 2010 meeting. Subsequently, a Contract Change Order Implementation Strategy for $51.5 Million was prepared and approved by the TBPOC in their February 3, 2011 meeting. The work involved in this change order was included as line items in the approved budget for the strategy.

Compensation for this work shall be paid at agreed unit prices, plus an amount set aside as extra work at force account. This CCO provides funding for an estimated cost of $NOT TO EXCEED 8,000,000. This will be funded from the project's contingency fund. A cost analysis is on file.

No adjustment of contract time is warranted, as this change will not affect the controlling operation.

This change was requested by Mike Whiteside, Branch Chief, Office of Toll Bridge design, on xx/xx/xxxx.

Maintenance concurrence was provided by Lina Ellis on xx/xx/xxxx.

CONCURRED BY:		
Construction Engineer:	William Howe	Date
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:	Charles Ho	Date
Project Manager:	Ken Terpstra	Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):	Lina Ellis, Str. Maintenance	Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue _Approve) By:	Larry Salhaney	Date
Resident Engineer's Signature:		Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$8,000,000.00	$8,000,000.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$8,000,000.00	$8,000,000.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE PERCENT

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b5
Item - Consent Calendar
Contract Change Orders (CCOs)
SAS CCO 167-S1 & YBITS1 CCO 902 – Furnish & Install LED Light Fixture, Install Light Poles

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Recommendation:
APPROVAL

Cost:
YBITS1 CCO # 902: $13,206,383
SAS CCO# 167-S1: $258,326

Schedule Impacts:
None

Discussion:
YBITS1 Change Order No. 902 and SAS CCO No. 167-S1 **in the total amount of $13,464,709 wi**ll provide for the procurement and installation of 1,079 18-inch pole mounted LED light fixtures for the entire east span structure and for the installation of 129 light poles for the OTD1 and Skyway structures. The poles to be installed are being furnished through a BATA procurement contract. The change order shall be funded from the $34,200,000 allocated for lighting and MEP integration work at the November 2008 TBPOC meeting.

The 18-inch LED light fixtures shall replace the 18-inch metal halide fixtures originally called for under the OTD1, Skyway and SAS contracts. The LED lighting provides for improved light distribution and energy efficiency along with reduced maintenance costs and is consistent with Caltrans policy to move towards more energy efficient lighting fixtures.

The cost of procuring of the LED fixtures has increased from the originally budgeted cost approved in November 2008. However, significant cost savings concerning the procurement of the light poles, particularly the elimination of the pole lowering system,

will offset these increased costs and no additional funding beyond the approved $34,200,000 is anticipated to be required.

Risk Management:

The Risk Register accounts for a total $34.2 million (dispersed into different contracts) to address MEP Integration Items approved by the TBPOC in 2008.

Attachment(s):

1. Draft YBITS1 CCO & CCO Memorandum 902-S0
2. Draft SAS CCO & CCO Memorandum 167-S1
3. Approved SAS CCO No. 167-S0

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 902	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Install 129 ea State furnished light poles on the Skyway & OTD structures and furnish & install (1043 ea) LED light fixtures to the 233 State furnished light poles on the Skyway, OTD & Yerba Buena Island Transition (YBIT) structures per the attached page no. 05 of this change order.

This work must meet all the requirements listed below and the attached Specifications (Page 06 through 11 of this change order).

I. Supplier Requirements

1. The selected LED fixture supplier shall be identified with the signed Change Order.
2. The supplier shall provide evidence that they have been in the business of street lighting or exterior large area lighting for a period of not less than 10 years.
3. A list with a minimum of 10 street lighting, or large area lighting projects successfully completed by the supplier shall be included with the signed Change Order. At least two of these projects must be from 8 or more years ago.

II. Submittals

The following submittals shall be submitted in the shop drawing process and be approved by the Engineer prior to start of production of the light fixtures. Each item shall be provided in the form of clear and concise statements and/or plans and drawings, which can be easily read and clearly interpreted. Each item shall also be clearly numbered to correspond with the following list. All items shall be assembled in the order indicated and secured or bound in a neat and orderly fashion for easy use and reference.

1. Computer generated illumination levels demonstrating compliance with the specified initial and maintained light levels and uniformities.
2. A copy of the photometric testing report performed per LM-79-08 and conducted by an NVLAP approved or CALiPER qualified testing laboratory. Include documents verifying laboratory accreditation.
3. Test data from the LED supplier taken per LM-80-08 guidelines to support the lamps' lumen maintenance predictions.
4. Provide technical information in the form of cut sheets for the Power Supplies verifying compliance to this specification for Harmonic Distortion, RF Interference, IP Rating, and Efficiency Rating.
5. Supply Surge Protection Device documentation verifying compliance with UL 1449 or UL 1238.
6. A written copy of the supplier's warranty covering all materials, workmanship, and labor for a period of 10 years or greater.

III. Lighting Criteria

A. Computer Predicted Illumination Summaries shall be provided on a 20' x 20' grid illustrating the predicted initial and maintained illumination values and uniformities.
B.The roadway lighting system shall maintain an average illuminance of 1.5 foot-candles over the entire roadway surface throughout the minimum operational life. The uniformity ratio of average to minimum illuminance must be 3:1 or less. The initial illuminance levels shall accommodate the fixture's lumen losses for the minimum operational life of 63,000 hours. For example, if the Lumen Maintenance Factor of the fixture is 70% at 63,000 hours, then the initial average illuminance levels is 2.15 foot-candles.
C.The supplier shall apply an L70 (70% lumen maintenance factor) for the maintained illuminance values. Maintained illuminance levels shall be 1.5 average foot-candles with a 3:1 average to minimum ratio. The maintained foot-candle for Belvedere area shall be 3.0.
D. In lieu of item III.B, the supplier may employ a constant illumination scheme in which the maintained illumination levels are achieved initially and the output of the fixture is increased over time to assure the illumination levels are always met.
E. In either case, the supplier must guarantee the illumination levels will be met for the entire warranty period.

IV. Fixture Design & Construction

A. Fixture
1. Construction
a. The luminaire shall consist of an aluminum housing with tempered glass lens, gasketed to seal the internal LED light sources and internal optics. Each LED shall be individually visored to mitigate glare to oncoming traffic and other areas off the bridge deck. The fixture shall be IP-66 rated and the shape shall be closely similar in shape and size to the conceptual design of original contract's metal halide fixtures, unless otherwise approved by the Engineer.
b. The front face of the housing shall be circular in shape with a smooth conical side view.
c. It shall be of adequate size and mass to provide the necessary heat dissipation to limit the LED junction temperature to 90°C or less at an ambient temperature of 25°C.
d. The L70 of the fixture must be 63,000 hours or greater, except for MAM fixtures, where the L70 must be 50,000 hours or greater.
e. The LED's shall be circuited such that failure of a single LED does not result in the loss of the entire luminaire.
f. The fixture assembly must be fabricated with materials and coatings that allow it to withstand a 3,000 hour salt spray test under ASTM B 117, this applies to all fixture types.
g. Heat dissipation shall be by passive design. Fans or other mechanical cooling devices shall not be permitted.
h. Heat dissipating fins shall be oriented to minimize the build-up of water or debris on the fixture and allow rain water to freely carry dust and debris away.
i. If a photoelectric receptacle is to be included, a rain tight cap must be provided. The receptacle must comply with Section 86-6.08B(1), "Photoelectric Unit", of the Standard Specifications.
j. Fixtures shall be painted to match Federal Standard 595B ranges matching the Bridge Paint color.

2. Light Sources
LEDs shall have a nominal correlated color temperature (CCT) range of 4,000 K to 5,000 K. The luminaire manufacturer must use the same CCT bin for all luminaires.
a. The supplier shall supply the LED suppliers test data performed per LM-80-08 guidelines to support the lamps' lumen maintenance.

B.Structural Attachment

1. The individual fixtures for the light poles shall be assembled to a welded tubular steel assembly that doubles as a wireway.
2. The tubular steel structure, fixtures, and all attachment points shall be designed by the supplier and approved by the Engineer.
3. Wiring for the light pole fixtures shall transition internally from the fixture to the structural attachment and from the structural attachment into the pole. There shall be no external conduits or SO Cords between the fixtures on the tubular steel structure.
4. All mountings and Structural attachments shall be hot-dipped galvanized and then powder coat painted to match the Bridge color.
5. Light pole fixture arrays for each size pole and number of poles are shown on attachment "A".
6. The light fixture supplier shall make all efforts to coordinate with the pole manufacturing for accuracy of all attachments requirements and other needs for the fixtures.

C. Drivers & Wiring
1. Drivers, Control Boards, & all associated electrical equipment shall be mounted at the top of the pole in the mounting boxes behind the fixtures.
2. Power Supplies shall be rated IP-66 minimum, have an efficiency of not less than 90% when operated at maximum load, and be power factor corrected (minimum 90%).
3. The RF interference of the power supplies and luminaires must meet Class A emission limits per Federal Communications Commission Title 47 Subpart B, Section 15 or EN61000-4-6.
4. The Total Harmonic Distortion (THD) of the power supply and fixtures shall be in compliance with EN61000-3-2.
5. The power supplies shall be rated to operate on a nominal 60 HZ, 480VAC input and rated for operation between temperatures of -25°C – 55°C.

6. The supplier shall supply a Surge Protection Device (SPD) to protect the fixtures from damage or failure due to transient voltages or currents. SPD must conform to UL 1449 or UL 1238, dependent upon the components used in the design.
7. A wire harness shall be provided by the fixture supplier to connect the LED Drivers and associated electrical equipment located at the bottom of the pole to the fixtures mounted at the top of the pole. The harnesses shall have quick connect plugs on both ends for easy installation and replacement of the drivers or fixtures and shall be encased in a plastic corrugated sleeve to protect it from abrasion inside the pole.
8. All conductors running from the power supplies at the bottom of the pole to the fixtures at the top of the pole shall be run internal to either the pole or the structural attachment of the fixture to the pole. Externally run conduits or SO Cords shall not be permitted.

D. Testing
1. Prior to production, the supplier shall provide a sample fixture of each different model they intend to provide for testing and verification. The fixtures must have been previously tested by the supplier for verification of the Junction Temperature (90°C), LED Solder Point Temperature, and ambient air temperature adjacent to the solder point at maximum operating wattage. Placement of temperature sensors shall be as follows:
a. Temperature sensors shall be mounted on the LED solder pads as close to the LED as possible.
b. One temperature sensor shall be mounted on the power supply (driver) case.
c. Light bar or modular systems shall have one sensor for each module, mounted as close to the center of the module. Other configurations shall have at least 5 sensors per luminaire. Contact Caltrans for advice on sensor location.
d. Thermocouples will be either Type K or Type C. Thermistors shall be negative temperature coefficient (NTC) type with a nominal resistance of 20k ohm.
e. The appropriate thermocouple wire shall be used. The leads shall be a minimum of 6 ft.
f. Documentation shall accompany the test unit that details the type of sensor used.
g. Junction Temperature shall be a calculated by adding the Solder Point Temperature to the LED supplier's rated thermal resistance in degrees Celsius per Watt.
2. The supplier shall supply their test data to the Department along with the production sample. Data shall include:
a. Maximum allowable operating power to the LED board in watts.
b. Input voltage to the fixture when the testing was conducted at the supplier's facility.
c. The LED supplier's rated thermal resistance of the LED in degrees Celsius per Watt.
3. All measurements shall be taken after the fixture has operated at maximum rated wattage for a minimum of 24 hours at an ambient temperature of 70°F (21°C) or greater.

V. Warranty for the LED fixtures and all related components procured under this change order:

A. The supplier shall warrant or insure the products to be free from defects in materials and workmanship for a period of not less than 10 years. This warranty or insurance shall cover all materials and labor (including removal & installation) during the 10-year period.
B. In the event that a fixture needs to be repaired or replaced within the 10-year warranty period, The Department will be responsible for the costs associated with lane closures & traffic control. The supplier shall be responsible for all costs associated with repair and/or replacement of the fixture including the necessary lifts and labor.
C. The Supplier's warranty or insurance policy will be provided directly from the Supplier to the Department. Upon acceptance of the Work, the Department agrees to release the Contractor (MCM) and the electrical subcontractor (Bleyco Electric) from any and all liability, loss or damage, which may result directly or indirectly from any defects in materials or workmanship in the LED fixtures and all related components procured under this change order.

The scope described above and attached specifications for this change order shall govern over the contract Special Provisions, Standard Specifications and Standard Plans where any conflict exists.

Extra Work at Force Account:

For any additional work necessary for the fabrication and installation of fixtures & other components, fit up issues with installation of light poles, providing additional fixtures and any work directed by the Engineer for which the cost is not covered by the lump sum amount will be paid for in accordance with Section 5-1.17 "Force Account Payment" of the Special Provisions and Section 4-1.03D "Extra Work" of the Standard Specifications.

Estimated cost of Extra Work at Force Account $500,000.00

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 902	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

Extra Work at Lump Sum:

For furnishing and installation of light fixtures the Contractor will receive a lump sum of $12,706,683. This sum constitutes full and complete compensation for furnishing all labor, material, tools and incidentals including all markups by reason of this change.

Estimated cost of Extra Work at Lump Sum $12,706,683.00

Estimated Cost: Increase ☑ Decrease ☐ **$13,206,683.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by		
Signature William Howe	**Resident Engineer** William Howe, Senior R.E.	**Date** 05.11.11
Approval Recommended by		
Signature Mike Forner	**Principal T.E.** Mike Forner	**Date** 5/11/2011
Engineer Approval by		
Signature	**Principal T.E.** Mike Forner	**Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by		
Signature	**(Print name and title)**	**Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM /

FROM: William Howe, Senior R.E.

FILE: E.A. 04 - 0120S4
CO-RTE-PM SF-80-12.7/13.2
FED. NO. NO FED AID

CCO#: 902	SUPPLEMENT#: 0	Category Code: BZZZ

CONTINGENCY BALANCE (incl. this change) **$70,063,295.50**

COST: **$13,206,683.00** INCREASE ☑ DECREASE ☐

HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO

SUPPLEMENTAL FUNDS PROVIDED: **$0.00**

IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO

CCO DESCRIPTION:
Furnish and Install light fixtures

PROJECT DESCRIPTION:
YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	0 Day(s)	0 Day(s)	0 %	8

THIS CHANGE ORDER PROVIDES FOR:

Installation of state furnished light poles on the Skyway and OTD structures and also to furnish & install LED light fixtures to the state furnished light poles at the San Francisco Oakland Bay Bridge Skyway , OTD and YBITS structures and as directed by the Engineer.

This contract calls for the construction of the Yerba Buena Island Transition structures of the east span of the new San Francisco Oakland Bay Bridge (SFOBB). As part of this contract the Contractor is required to install 68 light poles and fixtures furnished by the Department .

The Department issued a memo dated October 29, 2008 to integrate the mechanical, electrical and piping (MEP) utilities from the Skyway and OTD1 contracts into other contracts. This integration was proposed in order to mitigate risks to the opening of the new span and to enhance system compatabilities throughout the structure. This strategy was presented to and approved by the Toll Bridge Program Oversight Committee (TBPOC) in November of 2008.

As part of the completion of the Skyway and OTD1 electrical systems, this change order provides a lump sum for installation of 129 light poles and for furnishing & installing 1,043 LED light fixtures within the Skyway, OTD1 and YBITS 1 project limits. For this work the contractor shall be paid a lump sum of $12,706,683. The contractor will also be compensated a sum of upto $500,000.00 as extra work at force account for any adjustments and upgrades to the existing components of the lighting systems and also to provide any additional fixtures or other components as necessary and as directed by the Engineer.

This change order was presented to and approved by the Toll Bridge Program Oversight Committee (TBPOC) on May 5, 2011.

The total estimated cost of this change order is $13,206,683.00 , which shall be financed from the Contract's contingency fund. A cost estimate is on file.

No adjustment of contract time is warranted, as this change will not affect the controlling operation.

CONCURRED BY:		
Construction Engineer:	William Howe	Date 5-11-11
Bridge Engineer:	Mehran Ardakanian	Date 5/10/11
Project Engineer:		Date
Project Manager:		Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):		Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:		Date
Resident Engineer's Signature:		Date
William Howe		05-11-11

ESTIMATE OF COST		
	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$500,000.00	$500,000.00
AGREED PRICE	$12,706,683.00	$12,706,683.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$13,206,683.00	$13,206,683.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☑ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 167 Suppl. No. 1 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Lump Sum:

Furnish and Install additional 36 MSR LED light fixtures (3 per pole) for the 12 roadway light poles at the locations listed below.

Pole Number	Station	Roadway Side
1031-1	55+98	South
1031-2	56+36.18	South
1031-3	60+09.82	South
1031-4	60+56.18	South
1032-1	61+10	South
1032-2	61+63	South
2031-1	55+89	North
2031-2	56+27.18	North
2031-3	60+00.82	North
2031-4	60+47.18	North
2032-1	61+01	North
2032-2	61+54	North

This work shall meet all the requirements, terms, and conditions of CCO 167 S0 and its specifications.

For this work, the Contractor will receive a lump sum price of $258,326.00. This sum constitutes full and complete compensation for furnishing all labor, material, tools and incidentals including all markups by reason of this change.

Extra Work at Lump Sum.....$258,326.00

Estimated Cost: Increase ☒ **Decrease** ☐ **$258,326.00**

By reason of this order the time of completion will be adjusted as follows: 0 Days

Submitted by

Signature Kannu Bal — **Resident Engineer** Kannu Balan, Senior T.E. **Date** 5-18-11

Approval Recommended by

Signature Mike Foumi FOR **Principal Transportation Engineer** Peter Siegenthaler, Prin. T.E. **Date** 5-18-2011

Engineer Approval by

Signature **Principal Transportation Engineer** Peter Siegenthaler, Prin. T.E. **Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature (Print name and title) **Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DATE: 5/3/2011 Page 1 of 1

TO: Pete Siegenthaler, Prin TE /	FILE: **E.A.** 04 - 0120F4
FROM: Kannu Balan, Senior TE	**CO-RTE-PM** SF-80-13.2/13.9
	FED. NO.
CCO#: **167** SUPPLEMENT#: **1** Category Code: **CBSA**	CONTINGENCY BALANCE (incl. this change) **$172,596,962.11**
COST: **$258,326.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: Additional LEDs	**PROJECT DESCRIPTION:** CONSTRUCT SELF-ANCHORED SUSPENSION BRIDGE

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
2490 Day(s)	**0** Day(s)	**501** Day(s)	**20** %	**3**

THIS CHANGE ORDER PROVIDES FOR:

Furnishing and installing thirty-six (36) additional MSR LED light fixtures for the roadway light poles.

CCO 167S0 changed the light fixtures from Halide to LED. This supplement increases the quantity of LED fixtures to achieve the required light level and even distribution of light on the deck surface.

This change order will be presented to the Toll Bridge Program Oversight Committee (TBPOC) in May 2011 for their approval.

The cost of this supplemental change is $258,326.00, which can be financed from the contingency fund. This will result in a cumulative amount of $1,814,940.00 for CCO 167S0 and 167S1. A detailed cost estimate is on file.

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order has concurrence from Peter Siegenthaler (Principal TE), Ken Terpstra (Proj. Manager), Rich Foley (HQ Oversight), Wenyi Long (Design Oversight), Bill Zanetich (Maintenance), and Jing Chen (District Design) May 3, 2011.

The Resident Engineer requests Headquarters CCO Desk "Issue and Approve".

CONCURRED BY:			
Construction Engineer:	PCE, Pete Siegenthaler, Prin TE	Date	4/29/11
Bridge Engineer:		Date	
Project Engineer:	CT Oversight, Wenyi Long, P.E.	Date	5/3/11
Project Manager:	Proj Manager, Ken Terpstra	Date	4/29/11
FHWA Rep.:		Date	
Environmental:		Date	
Other (specify):	HQ, Rich Foley	Date	5/2/11
Other (specify):	Struct Maint, Bill Zanetich, P.E.	Date	4/29/11
District Prior Approval By:		Date	
HQ (Issue Approve) By:		Date	
Resident Engineer's Signature:	Kannu Balan	Date	5-2-11

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$100,000.00
AGREED PRICE	$258,326.00	$1,714,940.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$258,326.00	$1,814,940.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE PERCENT

CONTRACT CHANGE ORDER Change Requested by: Engineer

CCO: 167 Suppl. No. 0 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Lump Sum:

Item 1.

Furnish LED light fixtures in lieu of contract specified Metal Halide light fixtures for the 438 fixtures listed on Attachment A on sheet 5 of this change order. This work must meet all the requirements below and the attached revisions to Special Provisions Section 10-3.14 "LIGHTING" on sheets 6 through 13 of this change order.

I. Supplier Requirements

1. The selected LED fixture supplier shall be identified with the signed Change Order.
2. The supplier shall provide evidence that they have been in the business of street lighting or exterior large area lighting for a period of not less than 10 years.
3. A list with a minimum of 10 street lighting, or large area lighting projects successfully completed by the supplier shall be included with the signed Change Order. At least two of these projects must be from 8 or more years ago.

II. Submittals

The following submittals shall be submitted in the shop drawing process and be approved by the Engineer prior to start of production of the light fixtures. Each item shall be provided in the form of clear and concise statements and/or plans and drawings, which can be easily read and clearly interpreted. Each item shall also be clearly numbered to correspond with the following list. All items shall be assembled in the order indicated and secured or bound in a neat and orderly fashion for easy use and reference.

1. Computer generated illumination levels demonstrating compliance with the specified initial and maintained light levels and uniformities.
2. A copy of the photometric testing report performed per LM-79-08 and conducted by an NVLAP approved or CALiPER qualified testing laboratory. Include documents verifying laboratory accreditation.
3. Test data from the LED supplier taken per LM-80-08 guidelines to support the lamps' lumen maintenance predictions.
4. Provide technical information in the form of cut sheets for the Power Supplies verifying compliance to this specification for Harmonic Distortion, RF Interference, IP Rating, and Efficiency Rating.
5. Supply Surge Protection Device documentation verifying compliance with UL 1449 or UL 1238.
6. A written copy of the supplier's warranty covering all materials, workmanship, and labor for a period of 10 years or greater.

III. Lighting Criteria

A. Computer Predicted Illumination Summaries shall be provided on a 20' x 20' grid illustrating the predicted initial and maintained illumination values and uniformities.
B. The roadway lighting system shall illuminate the entire deck surface (driving lanes and shoulders) to a minimum of 2.15 initial average footcandles with a 3:1 maximum allowable average to minimum ratio.
C. The supplier shall apply an L70 (70% lumen maintenance factor) for the maintained illuminance values. Maintained illuminance levels shall be 1.5 average footcandles with a 3:1 average to minimum ratio. The maintained footcandle for Belvedere area shall be 3.0.
D. In lieu of item III.B, the supplier may employ a constant illumination scheme in which the maintained illumination levels are achieved initially and the output of the fixture is increased over time to assure the illumination levels are always met.
E. In either case, the supplier must guarantee the illumination levels will be met for the entire warranty period.

IV. Fixture Design & Construction

A. Fixture
   1. Construction

a. The luminaire shall consist of an aluminum housing with tempered glass lens, gasketed to seal the internal LED light sources and internal optics. Each LED shall be individually visored to mitigate glare to oncoming traffic and other areas off the bridge deck. The fixture shall be IP-66 rated and the shape shall be closely similar in shape and size to the conceptual design of original contract's metal halide fixtures, unless otherwise approved by the Engineer.
b. The front face of the housing shall be circular in shape with a smooth conical side view. It shall be of adequate size and mass to provide the necessary heat dissipation to limit the LED junction temperature to 90 C or less at an ambient temperature of 25°C. The LED's shall be circuited such that failure of a single LED does not result in the loss of the entire luminaire.
c. The fixture assembly must be fabricated with materials and coatings that allow it to withstand a 3,000 hour salt spray test under ASTM B 117, this applies to all fixture types.
d. Heat dissipation shall be by passive design. Fans or other mechanical cooling devices shall not be permitted.
e. Heat dissipating fins shall be oriented to minimize the build-up of water or debris on the fixture and allow rain water to freely carry dust and debris away.
f. If a photoelectric receptacle is to be included, a rain tight cap must be provided. The receptacle must comply with Section 86-6.08B(1), "Photoelectric Unit", of the Standard Specifications.
g. A quick attaching safety cable shall be affixed to all units to secure the fixture to the mounting cable or pole.
h. Fixtures shall be painted to match Federal Standard 595B ranges matching the Bridge Paint color.

2. Light Sources
   a. LED color temperature shall have a nominal color temperature of 4,250°Kelvin, +/- 250°K.
   L70 lumen maintenance of the LED's shall be rated for a minimum of 63,000 hours for all fixtures except for the MAM & MAP fixtures, which are rated for a minimum of 50,000 hours.
   b. The supplier shall supply the LED suppliers test data performed per LM-80-08 guidelines to support the lamps' lumen maintenance.

B. Structural Attachment
1. The individual cable light fixtures shall be designed to match the original contract's mounting configuration and no changes are allowed unless approved by the engineer.
2. The individual fixtures for the light poles shall be assembled to a welded tubular steel assembly that doubles as a wireway.
3. The tubular steel structure, fixtures, and all attachment points shall be designed by the supplier and approved by the Engineer.
4. Wiring for the light pole fixtures shall transition internally from the fixture to the structural attachment and from the structural attachment into the pole. There shall be no external conduits or SO Cords between the fixtures on the tubular steel structure.
5. All mountings and Structural attachments shall be hot-dipped galvanized and then powder coat painted to match the Bridge color.

C. Drivers & Wiring
1. Drivers, Control Boards, & all associated electrical equipment shall be mounted as per the original contact documents for all cable light fixtures, unless approved by the engineer. On the light poles they can be located inside the pole near the bottom across from the handhole opening.
2. Power Supplies shall be rated IP-66 minimum, have an efficiency of not less than 90% when operated at maximum load, and be power factor corrected (minimum 90%).
3. The RF interference of the power supplies and luminaires must meet Class A emission limits per Federal Communications Commission Title 47 Subpart B, Section 15 or EN61000-4-6.
4. The Total Harmonic Distortion (THD) of the power supply and fixtures shall be in compliance with EN61000-3-2.
5. The power supplies shall be rated to operate on a nominal 60 HZ, 480VAC input and rated for operation between temperatures of -25°C – 55°C.
6. The supplier shall supply a Surge Protection Device (SPD) to protect the fixtures from damage or failure due to transient voltages or currents. SPD must conform to UL 1449 or UL 1238, dependent upon the components used in the design.
7. A wire harness shall be provided by the fixture supplier to connect the LED Drivers and associated electrical equipment located at the bottom of the pole to the fixtures mounted at the top of the pole. The harnesses shall have quick connect plugs on both ends for easy installation and replacement of the drivers or fixtures and shall be encased in a plastic corrugated sleeve to protect it from abrasion inside the pole.

8. All conductors running from the power supplies at the bottom of the pole to the fixtures at the top of the pole shall be run internal to either the pole or the structural attachment of the fixture to the pole. Externally run conduits or SO Cords shall not be permitted.

D. Testing
   1. Prior to production, the supplier shall provide a sample fixture of each different model they intend to provide for testing and verification. The fixtures must have been previously tested by the supplier for verification of the Junction Temperature (90 C), LED Solder Point Temperature, and ambient air temperature adjacent to the solder point at maximum operating wattage. Placement of temperature sensors shall be as follows:
      a. One device at the LED solder point to determine Solder Point Temperature.
      b. One device adjacent to the solder point to measure internal ambient air temperature.
      c. One device located at the center of the fixture at the point where the LED optical & mechanical assembly attaches to the heat sink.
      d. Junction Temperature shall be a calculated by adding the Solder Point Temperature to the LED supplier's rated thermal resistance in degrees Celsius per Watt.
   2. The supplier shall supply their test data to the Department along with the production sample. Data shall include:
      a. Maximum allowable operating power to the LED board in watts.
      b. Input voltage to the fixture when the testing was conducted at the supplier's facility.
      c. The LED supplier's rated thermal resistance of the LED in degrees Celsius per Watt.
   3. All measurements shall be taken after the fixture has operated at maximum rated wattage for a minimum of 24 hours at an ambient temperature of 70°F (21°C) or greater.

V. Warranty for the LED fixtures and all related components procured under this change order:

A. The supplier shall warrant or insure the products to be free from defects in materials and workmanship for a period of not less than 10 years. This warranty or insurance shall cover all materials and labor (including removal & installation) during the 10-year period.
B. In the event that a fixture needs to be repaired or replaced within the 10-year warranty period, The Department will be responsible for the costs associated with lane closures & traffic control. The supplier shall be responsible for all costs associated with repair and/or replacement of the fixture including the necessary lifts and labor.
C. The Supplier's warranty or insurance policy will be provided directly from the Supplier to the Department. Upon acceptance of the Work, the Department agrees to release the Contractor (ABFJV) and the electrical subcontractor (Bleyco Electric) from any and all liability, loss or damage, which may result directly or indirectly from any defects in materials or workmanship in the LED fixtures and all related components procured under this change order.

The scope described above and attached specifications for this change order shall govern over the contract Special Provisions, Standard Specifications and Standard Plans where any conflict exists.

For this work, the Contractor will receive a lump sum price of $1,456,614.00. This sum constitutes full and complete compensation for furnishing all labor, material, tools and incidentals including all markups by reason of this change. The installation cost for all fixtures are already included in the original contract scope of work.

Extra Work at Lump Sum.....$1,456,614.00

Extra Work at Force Account:
Item 2.

For any minor additional work as directed by the Engineer, necessary for fabrication and installation of the fixtures & other components, which cost is not covered by the lump sum amount above and the original scope of the contract.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with the provisions of Section 4-1.03D, "Extra Work" of the Standard Specifications and Section 5-1.24, "Force Account Payment" of the Special Provisions.

Estimated Cost of Extra Work at Force Account.....$100,000.00

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 167 Suppl. No. 0 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

CHANGE ORDER COST AND TIME SUMMARY

(ITEM 1) Extra Work at Lump Sum	$1,456,614.00
(ITEM 2) Extra Work at Force Account	$100,000.00
Total net pay for this change order	$1,556,614.00

This sum constitutes full and complete compensation for furnishing all labor, material, tools and incidentals including all markups by reason of this change.

Estimated Cost: Increase ☒ **Decrease** ☐ **$1,556,614.00**

By reason of this order the time of completion will be adjusted as follows: 0 Days

Submitted by

Signature Kannu Balan **Resident Engineer** Kannu Balan, Senior T.E. **Date** 1-31-2011

Approval Recommended by

Signature B Boal **Supervising Bridge Engineer** Brian Boal, Actg. Sup. B.E. **Date** 31 JAN 2011

Engineer Approval by

Signature Pete Siegenthaler **Principal Transportation Engineer** Peter Siegenthaler, Prin. T.E. **Date** 2-10-11

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature (Print name and title) BRIAN A. PETERSEN - PROJECT DIRECTOR **Date** 09FEB11

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b6
Item - Consent Calendar
Contract Change Orders (CCOs)
Dumbarton Contract CCO #27 – Modify Steel Cross Frame Welds

Recommendation:
APPROVAL

Cost:
$5,223,100

Schedule Impacts:
71 Working Days

Discussion:
Dumbarton Change Order No. 27 **in the amount of $5,223,100** provides for changes to the welded connections of the steel cross frames at Piers 17 through 30. The contract requires the existing steel bracings at the 14 piers be removed and replaced with more extensive bracing. The change order specifies weld thicknesses of up to 1-inch at the top and bottom chord connections compared to the minimum weld thickness of 5/16-inch specified in the contract plans.

The design load of the steel connections was not included in the contract plans. The contractor's bid was based on the minimum weld size specified by code. These weld size modifications are needed to meet the required design loads. The increased weld thickness requires approximately 2,600 pounds of additional weld material be placed over the 14 piers. The added welding will require a considerable increase in both direct labor to perform the welding and indirect labor to support the welding operation which is performed at night under lane closures.

The welding changes will result in extended time to complete each pier retrofit and have also resulted in significant delays to the shop drawing approval process. These delays will result in the first full bridge closures being pushed out to Memorial Day 2012 from the original planned Labor Day 2011 and the second full closure being

pushed out to Labor Day 2012 from the planned Memorial Day 2012. The change will result in a not to exceed 71-working day delay to the contract completion.

The cost resulting directly from the actual welding changes has been identified to be approximate $3.1 million with no schedule mitigation costs. The non-mitigated delay would result in the work required for the 2nd full bridge closure to be completed in December of 2012. Since a full bridge closure could not be implemented during the winter months due to temperature and moisture restrictions, additional schedule delays would impact the December 2012 above mentioned date. As a result, a four- to five-month delayed bridge closure is to be expected at a cost of $1 million bringing the anticipated non-mitigated CCO costs to $4.1 million. Additionally, four piers of the bridge would have to remain sitting on jacks during this four- to five-month delay period. The recommended $5.2 million requested under CCO #27 provides for the full bridge closure to be pulled back to Labor Day Weekend 2012, mitigating the risk associated with the winter delay.

Risk Management:

Welding issues in the tub girder have been the largest direct cost risk on the Dumbarton Retrofit since the project was added to the program in January 2010. The project supplemental funding set aside $1.2M to cover potential welding issues. In addition, the risk register identified welding risks with a probable cost of $4.5 million. Thus between the risk register and the supplemental funds, there is $5.7 million set aside in the current forecast to address this CCO #27 S-0.

Attachment(s):

1. Draft CCO: 27-S0
2. Draft CCO 27-SO CCO Memo
3. Mitigated vs. Non-Mitigate Costs Comparison
4. Mitigated Schedule Analysis
5. Impacted Bridge Jacking Handout

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 27	Suppl. No. 0	Contract No. 04 - 1A5224	Road SM, Ala-84-R28.8/ R30.2, R0.0/ R0.8	FED. AID LOC.: NO FED AID

To: **SHIMMICK CONSTRUCTION COMPANY INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Adjustment of Compensation at Lump Sum:

Incorporate the added weld symbols and sizes, the modified weld designations and the modified dimensions and limits into the Contract and delete the 1" x 8" top chord diaphragm plate pertaining to the retrofit of the steel cross frames at Piers 17 through 30 of the Dumbarton Bridge (Br. No. 35-0038) as shown on Sheets No. 2 through 7 (Revised Contract Plan Sheets No. 269Rm 271R, 272R, 273R, 275R and 276R of 396) of this change order.

For this work, the Contractor shall be compensated an agreed lump sum of $4,883,535.00 which constitutes full compensation, including all markups, complete in place, for this change.

In accordance with Section 10-1.23, "Time-Related Overhead," of the Special Provisions, the contractor shall be compensated an agreed lump sum of $339,565.00 for time-related overhead costs pertaining to the 71 working day time extension being granted under this change order. This sum constitutes full compensation, including all markups, for all additional time-related overhead costs incurred due to this change. Payment will be made in accordance with Section 10-1.23, "Time Related Overhead," of the Special Provisions.

The compensation provided under this change order constitutes full compensation, including all markups, for all costs associated with all Department impacts to the steel cross frame shop drawing and steel fabrication process incurred by the Contractor's steel fabricator Stinger Welding Inc.

Estimated cost of Adjustment of Compensation at Lump Sum $5,223,100.00

A determination of the delay in the completion of the Contract due to this change order has been made in accordance with Section 10-1.22,"Progress Schedule (Critical Path Method)," of the Contract Special Provisions and Section 8-1.07,"Liquidated Damages," of the Standard Specifications. The Contract shall be granted a 71 working day time extension as a result of this change.

The 71 day time extension granted under this change order resolves all outstanding contract time extension issues including all time impact analyses submitted by the Contractor to date. No additional time extension shall be granted for these issues.

The compensation provided under this change order constitutes full compensation, including all markups, for all costs associated with the 71 working day time extension granted under this change including but not limited to extended overhead costs, extended equipment costs and escalation costs and no additional compensation shall be paid.

This change order provides for the Contractor to mitigate Contract delays resulting from both delays to the shop drawing and steel fabrication process for the steel cross frames and for the extended field work resulting from the increased weld sizes. The Contractor shall also mitigate delays stemming from the revised sequencing of their bridge jacking and bearing installation work due to the schedule impacts resulting from this change. The Contractor shall implement a 6-day work week and work extended shift hours in order to mitigate these delays to the extent that the full bridge closures for work at Piers 16 and 31 will take place over Memorial Day Weekend and Labor Day Weekend of 2012.

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 27	Suppl. No. 0	Contract No 04 - 1A5224	Road SM, Ala-84-R28.8/ R30.2, R0.0/ R0.8	FED. AID LOC.: NO FED AID

Estimated Cost: Increase ☑ Decrease ☐ **$5,223,100.00**

By reason of this order the time of completion will be adjusted as follows: 71 days

Submitted by

Signature	Resident Engineer BEN GHAFGHAZI	Date

Approval Recommended by

Signature	Construction Manager Amer Bata	Date

Engineer Approval by

Signature	Principal Transportation Engineer Mike Forner	Date

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DATE: 5/2/2011 Page 1 of 2

TO: AMER BATA / BEN GHAFGHAZI	FILE: E.A. 04 - 1A5224
	CO-RTE-PM SM, Ala-84-R28.8/ R30.2, R0.0/ R0.8
FROM: BEN GHAFGHAZI	FED. NO. NO FED AID
CCO#: 27 SUPPLEMENT#: 0 Category Code: CHPT	CONTINGENCY BALANCE (incl. this change) $3,215,841.28
COST: $5,223,100.00 INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: $0.00	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: Steel Cross Frame Weld Modifications	**PROJECT DESCRIPTION:** Seismic retrofit of Dumbarton Bridge and Construction of Pump Plant

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
460 Day(s)	71 Day(s)	10 Day(s)	18 %	0

THIS CHANGE ORDER PROVIDES FOR:
Modifications to the retrofit of the steel cross frames of the Dumbarton Bridge.

This project provides for the seismic retrofit of the Dumbarton Bridge. The bridge is an approximately 8,600 lineal feet in length serving both eastbound and westbound traffic. The structure is comprised of 42 land based bents and 44 water based concrete piers which are spanned by steel box and concrete girders with a concrete deck surface.

As part of the work, the contract calls for retrofit of the steel cross frames at Piers 17 through 30. This work involves removing 2 of the 3 existing steel braces and installing 8 new steel braces, columns and cords. Approximately 700,000 pounds of steel will be installed in the 14 piers being retrofitted.

After a review of the plans, it was determined that additional welding details needed to be added to provide for the intended design. The Office of Structures Design has issued revised plan sheet that provide for these added details which are being incorporated under this change order. The revised plan sheets also provide modified dimensions to account for actual field conditions and the elimination of top chord diaphragm plate.

The added welding details increases the minimum weld size from 5/16-inch to up to 1-inch at the top and bottom connections for the new bracing. This will require significantly more field welding for the installation of these members with over 2,600 pounds of additional weld material required to be placed over the 14 piers. This will require significantly more time and costs to install the bracing.

The change order will provide a 71 working day time extension due to the increased work required. The actual delay to the project due to this change order is estimated at 135 working days, however, the change order provides for the contractor to mitigate a portion of this delay in order to meet the full bridge closure milestones listed within the contract. Accordingly, the contractor's time-related overhead shall be adjusted by 71 working days as specified under Section 10-1.23 "Time-Related Overhead" of the contract special provisions.

Costs associated with this increased welding includes the direct cost of the welding including additional labor and equipment hours and support costs associated with the welding work including additional lane closures and providing additional ventilation and non-destructive testing. Additional costs shall be paid for mitigating a portion of the Department's delay in the form of working extended shifts and the inefficiencies related to these mitigating efforts.

Cost associated with shop drawing revisions and steel fabrication impacts pertaining to the steel cross frames is deferred and will be compensated under a separate change order as these costs have not been agreed to date. No additional time extension shall be granted due to these impacts.

Compensation for the additional costs pertaining to the welding changes including mitigating a portion of the Department's delays will be paid as an adjustment of compensation at an agreed lump sum of $4,883,535.00. Additional time-related overhead costs will be paid as an adjustment of compensation at an agreed lump sum of $339,565.00. The total change order cost of $5,223,100.00 shall be financed from the contract's contingency funds. A detailed cost analysis is on file.

CONCURRED BY:			
Construction Engineer:	Ben Ghafghazi	Date	4/5/11
Bridge Engineer:	Hazzaa El-Mahmoud	Date	4/5/11
Project Engineer:		Date	
Project Manager:	Mo Pazooki	Date	
FHWA Rep.:		Date	
Environmental:		Date	
Other (specify):		Date	
Other (specify):		Date	
District Prior Approval By:		Date	
HQ (Issue Approve) By:		Date	
Resident Engineer's Signature:		Date	

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$0.00	$0.00
ADJUSTMENT	$5,223,100.00	$5,223,100.00
TOTAL	$5,223,100.00	$5,223,100.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

Dumbarton Bridge Seismic Retrofit (04-1A5224)
CCO No. 27 Cost Estimate
Comparison of $3.1M vs. $5.2M CCO Cost

5/20/2011

daj

Cost Item	No Delay Mitigation	Mitigate Delay for Labor Day 2012 Bridge Closure
Steel Shop Drawing & Fabrication Impacts	$ 140,000	$ 140,000
Additional Cross Frame Welding Costs & Support	$ 1,450,000	$ 1,450,000
Furnish Additional Jacks for Pier 16 through 19	$ 270,000	$ 270,000
Time Extension Costs:		
Time Related Overhead ($4,780 / WD)	$ 650,000	$ 340,000
Extended Equipment & Escalation (TRO+)	$ 610,000	$ 550,000
Delay Mitigation Costs to Meet Labor Day 2012 Bridge Closure		
Premium Time Labor Costs	$ -	$ 670,000
Labor Inefficiencies (Due to 6-Day Work Week)	$ -	$ 1,170,000
Additional Field Supervision	$ -	$ 360,000
Added Saturday Lane Closures	$ -	$ 270,000
Total CCO Cost	**$ 3,120,000**	**$ 5,220,000**
Anticipated Delay for Spring 2013 Full Bridge Closure	**$ 1,000,000**	$ -
Anticipated Final Cost	**$ 4,120,000**	**$ 5,220,000**

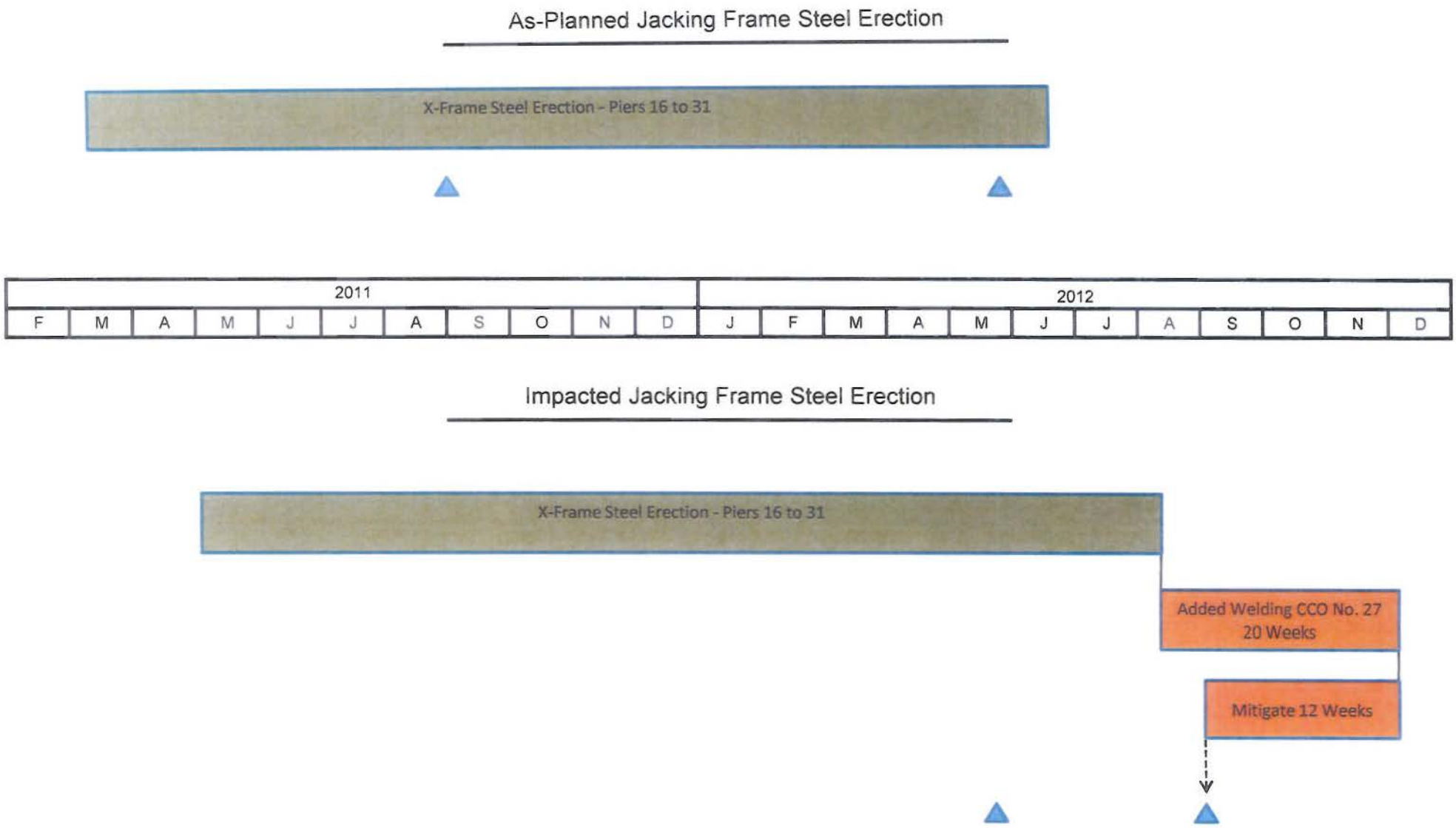
Resulting Schedule & Anticipated Full Bridge Closure Dates

1st Bridge Closure (Pier 16)	Memorial Day 2012	Memorial Day 2012
2nd Bridge Closure (Pier 31)	Ready for Closure By Early December 2012. First Available Closure Weekend Unknown ??	Labor Day 2012
Project Completion	3-Months after 2nd Bridge Closure Spring / Summer 2013	Early December 2012

Dumbarton Retrofit (04-1A5224)
CCO No. 27 Cost Estimate

5/20/2011
daj

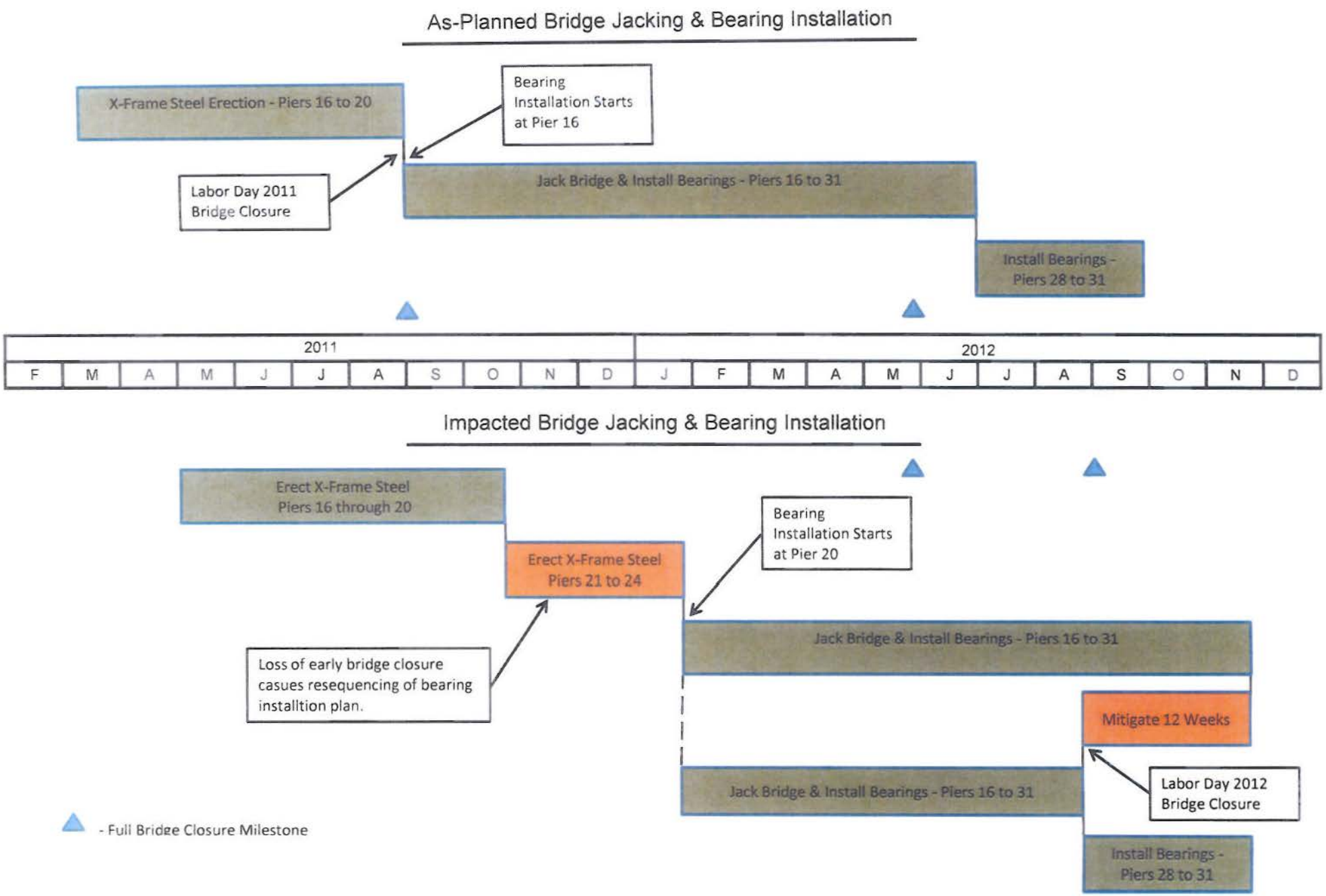
Impacts to Cross Frame Steel Erection



Dumbarton Retrofit (04-1A5224)
CCO No. 27 Cost Estimate

5/5/2011
daj

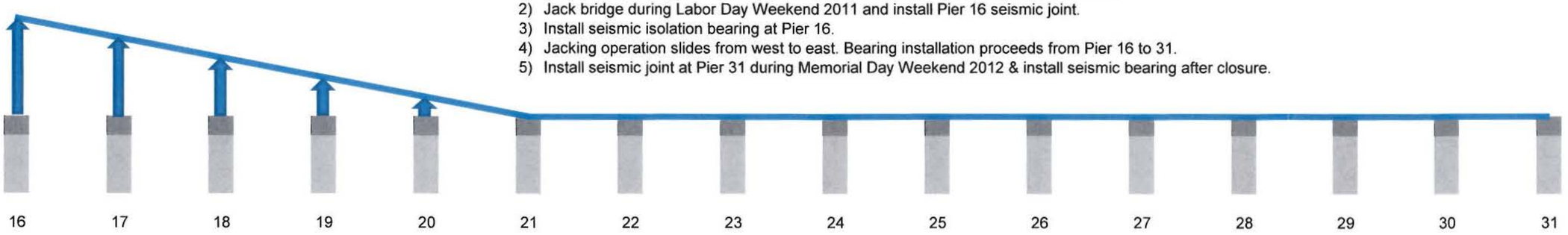
Impacts to Bearign Installation Schedule



Dumbarton Bridge Retrofit (Contract 04-1A5224)

Shimmick As-Planned Bridge Jacking Operation

1) Install steel jacking frames at Piers 16 through 20 before Labor Day Weekend 2011
2) Jack bridge during Labor Day Weekend 2011 and install Pier 16 seismic joint.
3) Install seismic isolation bearing at Pier 16.
4) Jacking operation slides from west to east. Bearing installation proceeds from Pier 16 to 31.
5) Install seismic joint at Pier 31 during Memorial Day Weekend 2012 & install seismic bearing after closure.

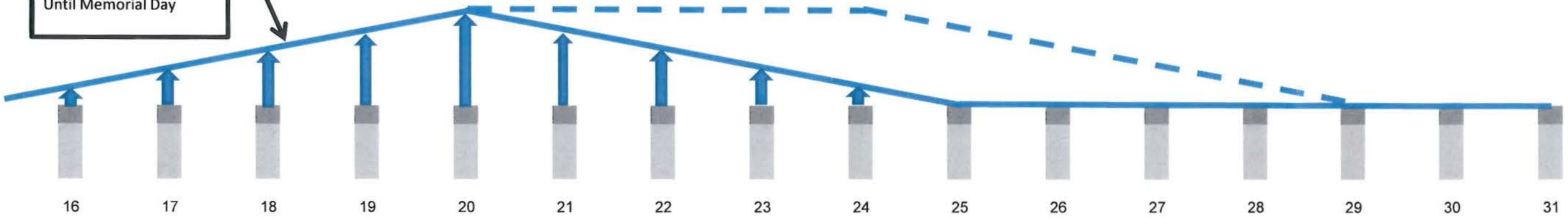


First Isolation Bearing Installation Results in 3 Month Delay to Start of Work

Revised Bridge Jacking Operation

1) Install steel jacking frames at Piers 16 through 24.
2) Jack bridge and install seismic isolation bearing at Pier 20 (January 2012).
3) Jacking operation slides from west to east. Bearing installation proceeds from Pier 21 to 31.
4) Install seismic joint at Pier 16 during Memorial Day Weekend 2012 & install bearing after closure.
5) Install seismic isolation bearing at Pier 31 during Labor Day Weekend 2012 & install seismic bearing after closure.

Pier 16 to 19 on Jacks Until Memorial Day



Impacts Due to Revised Bridge Jacking Operation

1) 3 Month delay to start of bearing installation. 9 Jacking frames need to be installed vs. 5 frames due to loss of Labor Day Weekend 2011.
2) Jacking & bearing installation delay needs to be mitigated in order to meet 2nd bridge closure of Labor day Weekend 2013.
3) Additional jacks are required to keep Piers 16 to 19 jacked until Memorial Day Weekend 2012.

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Jon Tapping, Toll Bridge Program Risk Management Coordinator, Caltrans

RE: Agenda No. – 3a

Item – Progress Reports
TBSRP 1st Quarter 2011 Risk Management Update

Action:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
The Toll Bridge Program Risk Management Coordinator will provide an overview of the 1st Quarter 2011 risk management results. Attached is a copy of his presentation.

Attachment(s):
Risk Management Briefing, First Quarter 2011

Risk Management Briefing
First Quarter 2011

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

Toll Bridge Program Oversight Committee Meeting
June 2, 2011

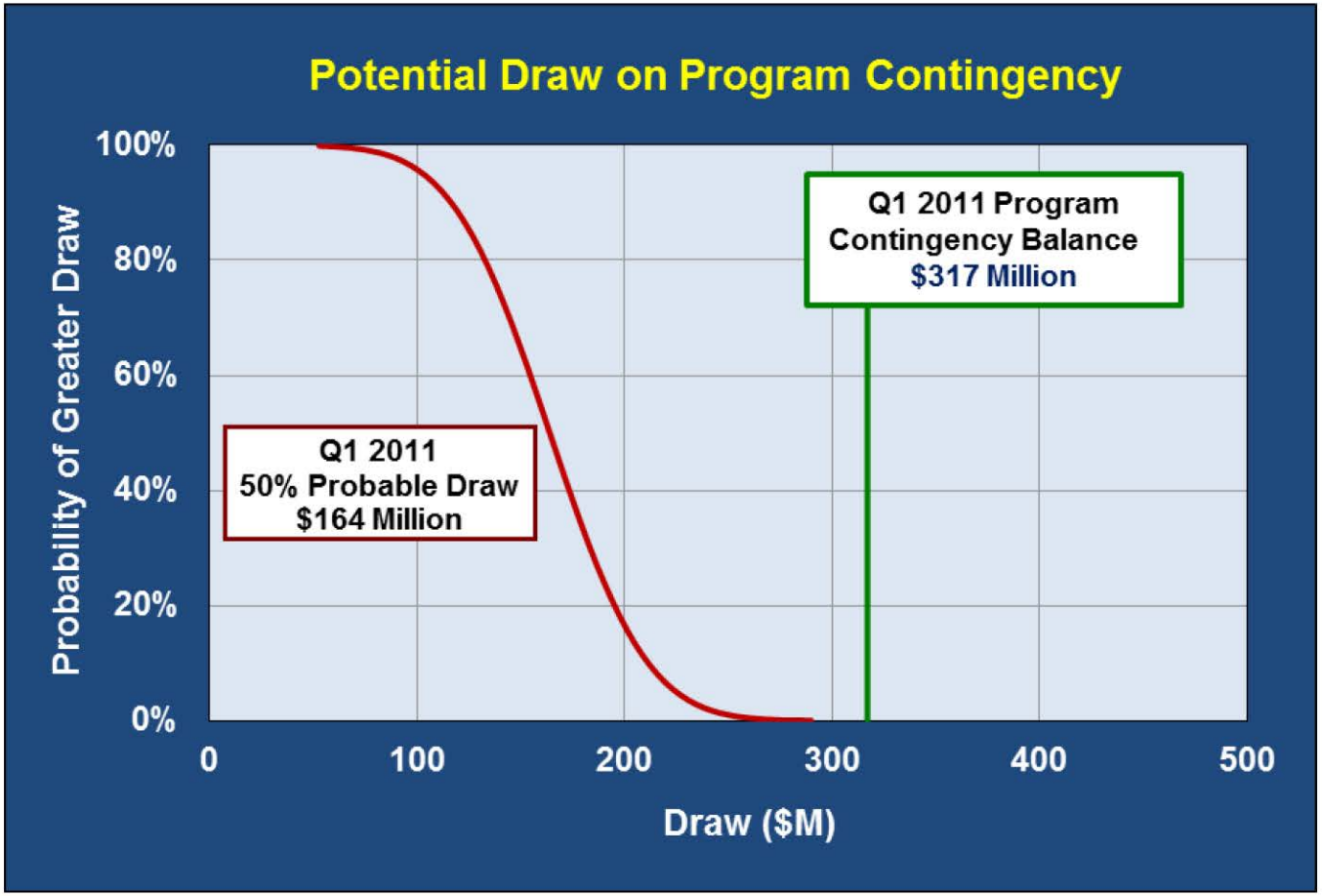
Outline

Adequacy of Reserves and Trend

Risk Management Performance

Look Ahead to Q2 2011

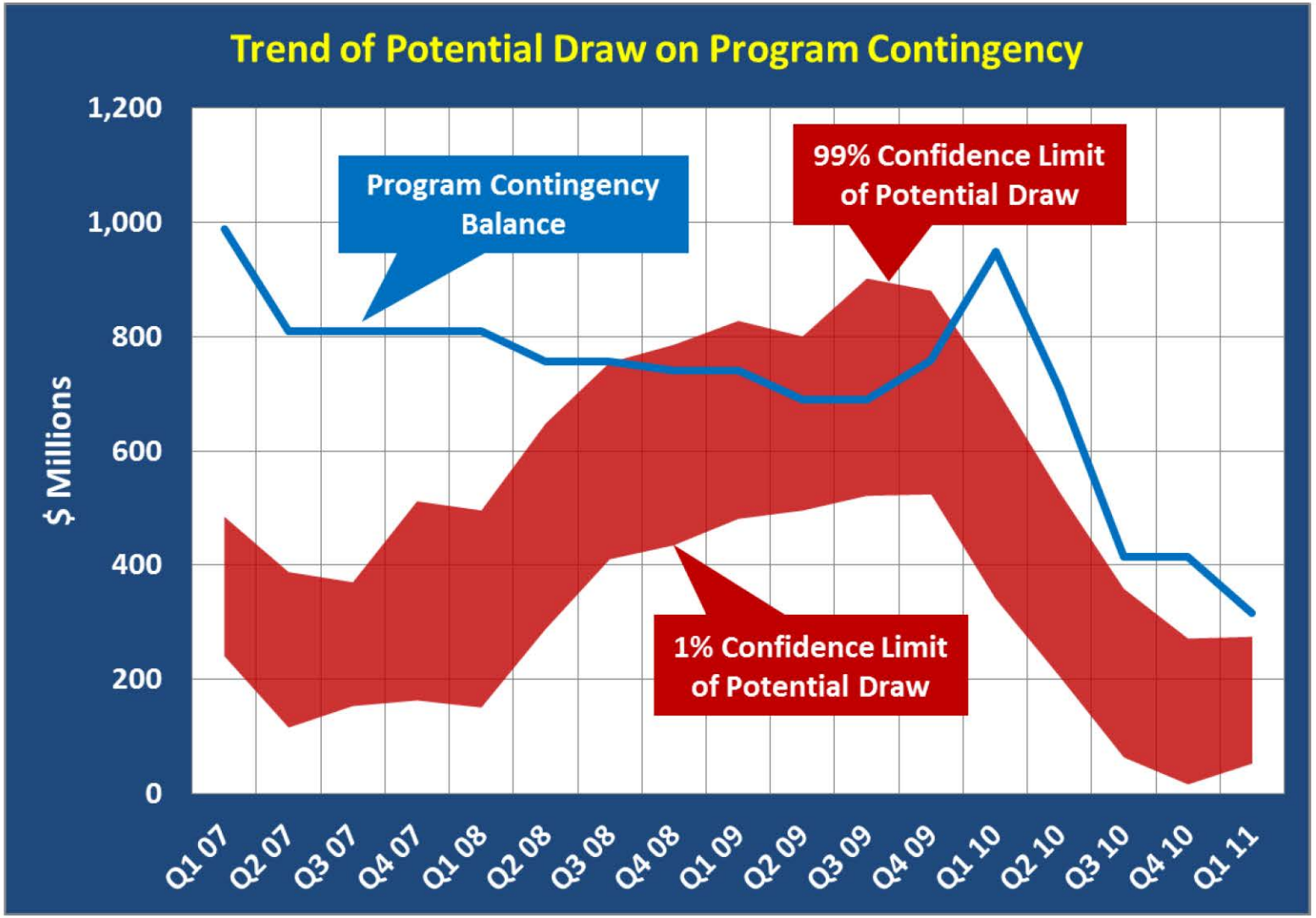
Q1 2011 Adequacy of Reserves



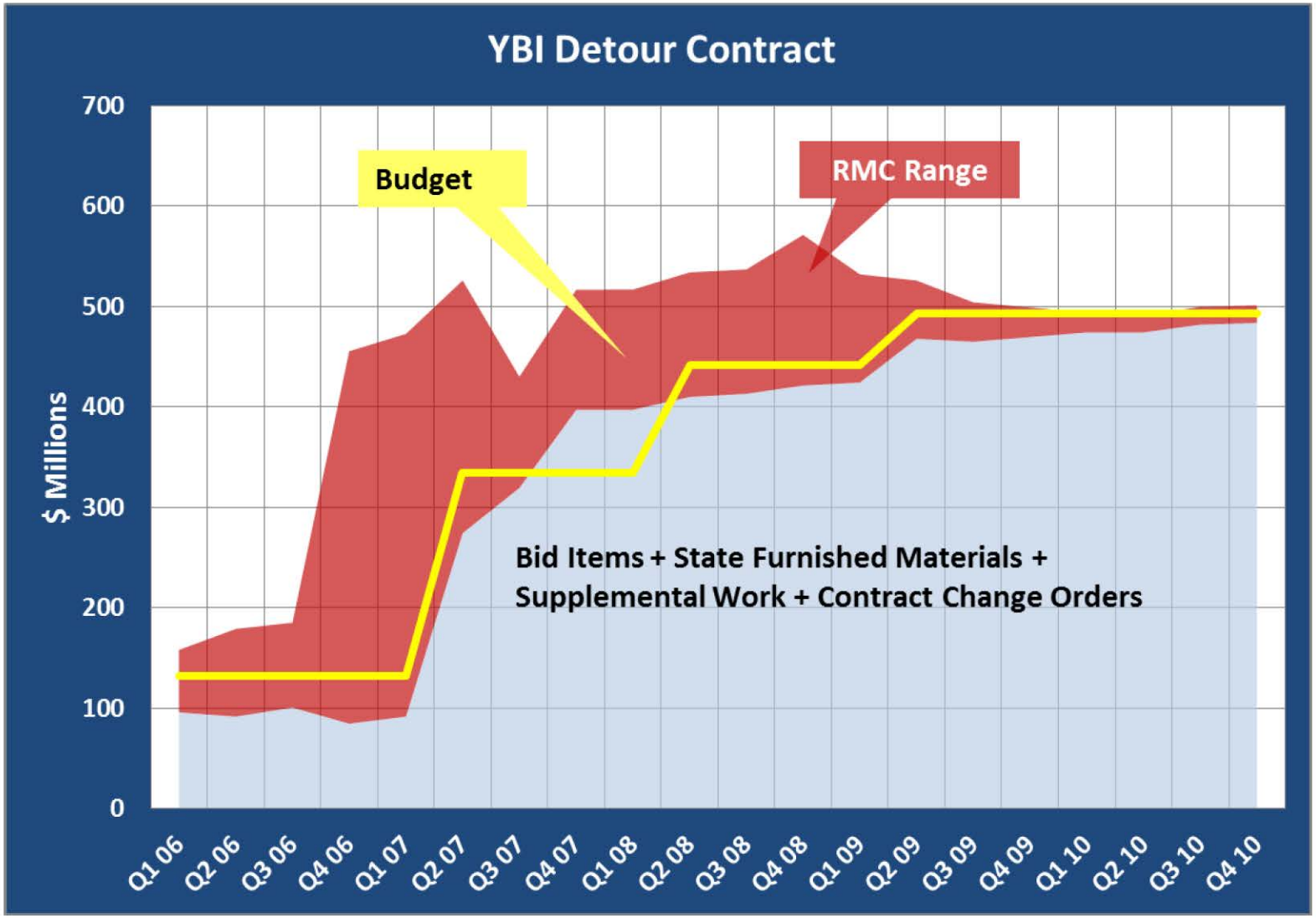
Notes:

1) ***Proposed architectural enhancements and out-of-scope project improvements are excluded unless approved by the TBPOC.***
2) ***The potential draw chart should not be construed as a forecast of the future balance of Program Contingency funds.***

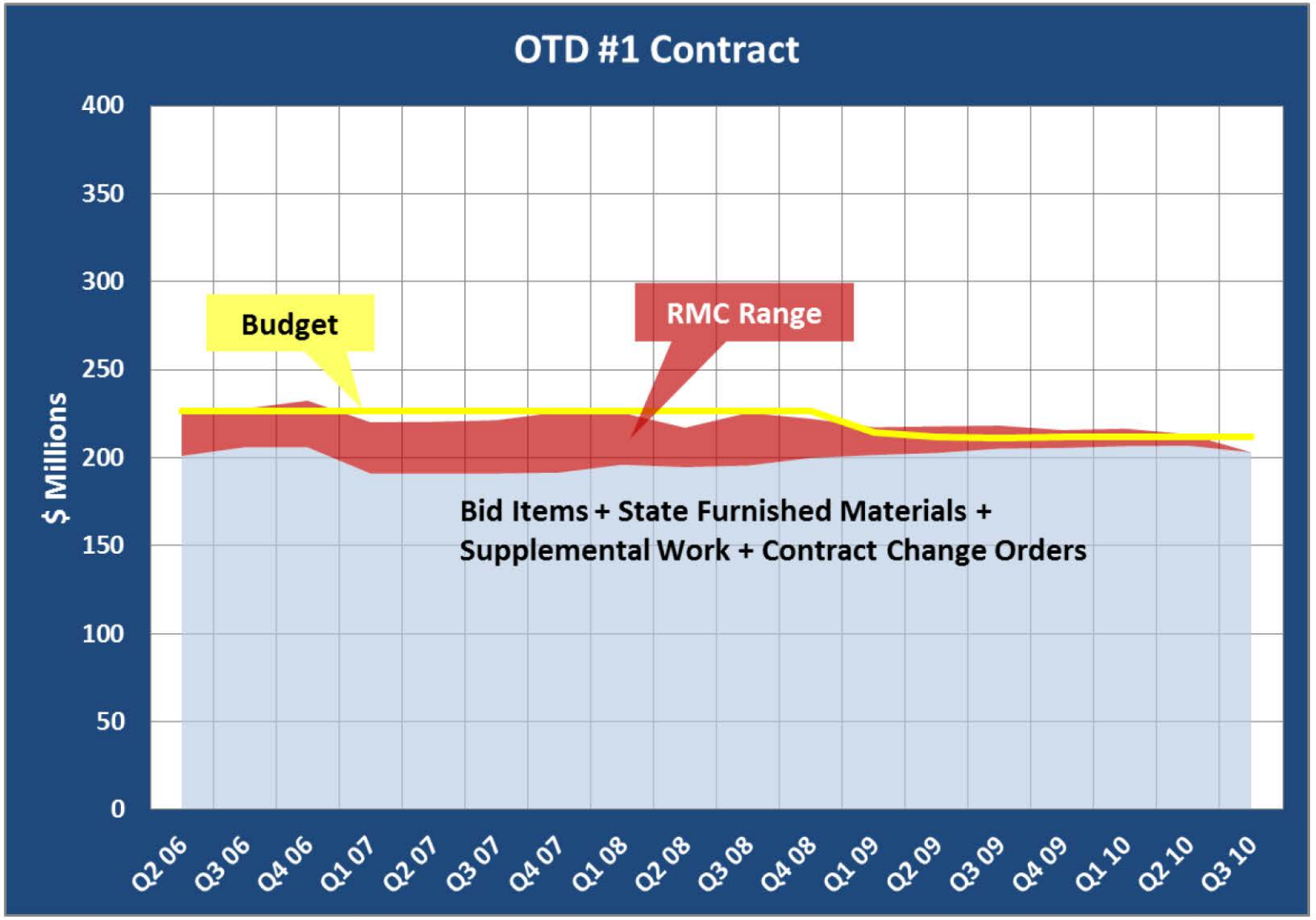
Program Contingency Trend



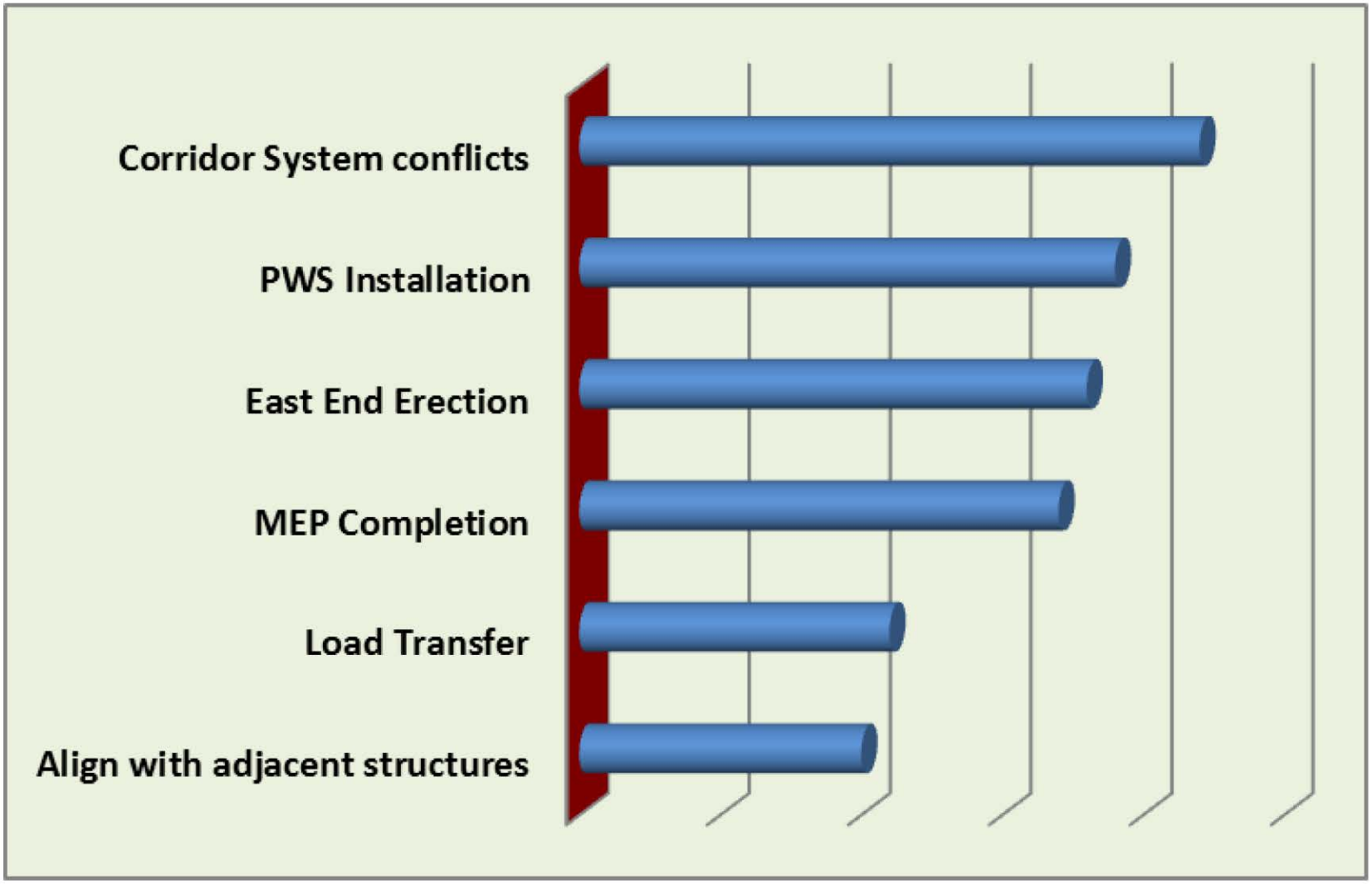
YBI Detour RM Performance



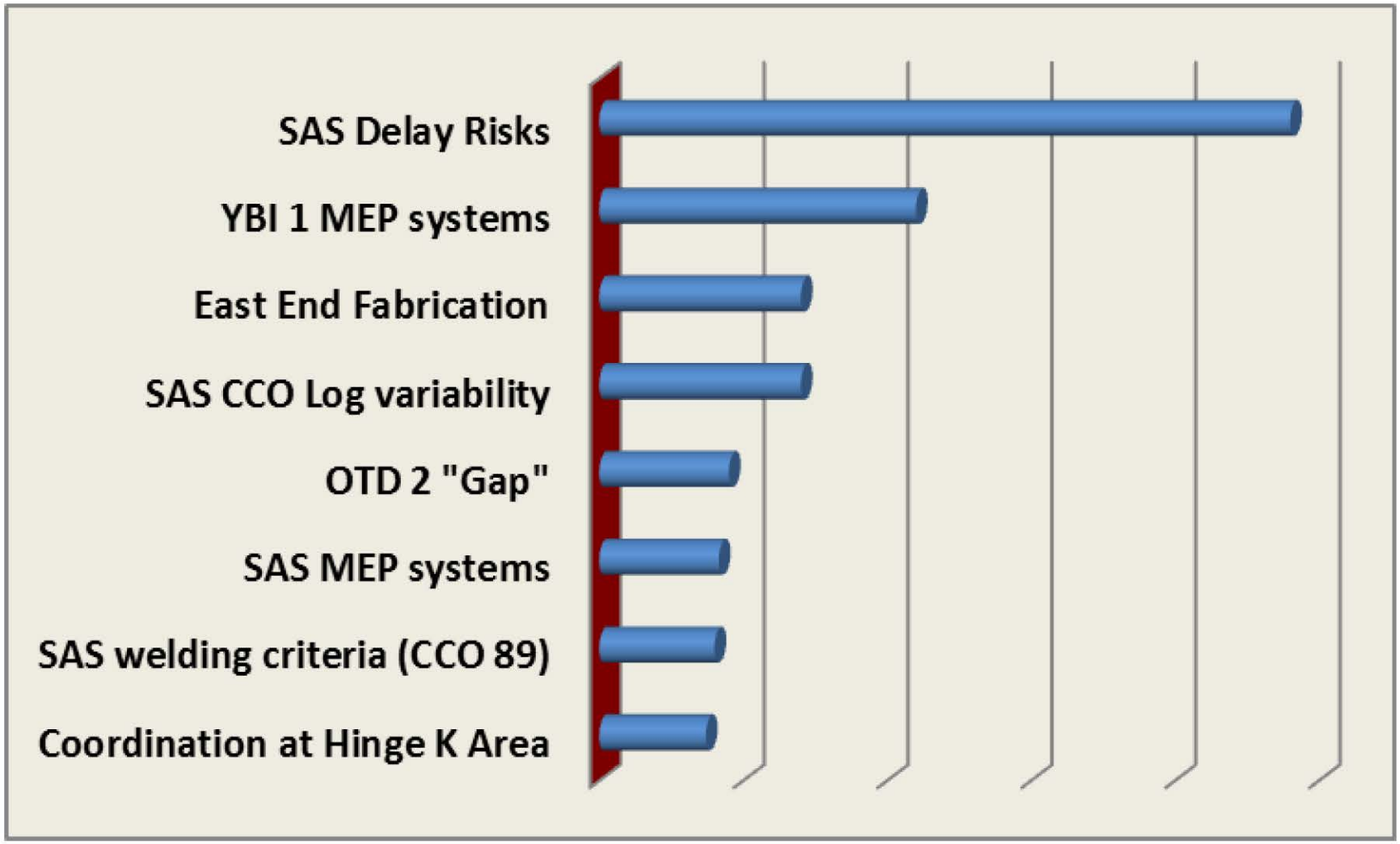
OTD #1 RM Performance



Look ahead to Q2 2011
Top Corridor Schedule Risks



Look ahead to Q1 2011
Top Cost Risks



Look ahead to Q2 2011

- **While CCO 160 greatly reduced risk and uncertainty, there are still schedule and cost risks associated with SSO.**
  - ✓ **Fabrication and erection of OBG 13/14, cable works, load transfer, and MEP works.**
- **The project team and SAS contractor are collaborating to manage the project schedule going forward.**
  - ✓ **Working on coordinating SAS and YBI #1 contracts to reduce risks to SSO.**
- **Complete Demo Project quantitative cost risk analysis in concert with ongoing project scope and procurement determination.**

Look ahead to Q1 2011
"Watch List"

Table of potential corridor improvements in various stages of assessment .

Potential Improvement	Quantified in a Risk Register	Status
Bike Path conduits at railing dividers, "Pig Tail" removal	No	PMT concurred. Present to TBPOC in May for approval
Revisions to LED lighting fixtures to maintain diameter and increase number of fixtures	No	PMT concurred. Present to TBPOC in May for approval
Maintenance/Safety Railing on Tower Shear Link Facades, Deck Cross Beams & W2	No	PMT concurred. Expect to execute a CCO in May
Top of Tower (Parapet Wall)	No	PMT concurrence to proceed with Plans and Estimate. Present to PMT in May.
Bike Path Railing Divider	No	PMT concurrence to proceed with Plans and Estimate. Awaiting a cost estimate.
Light Pipe	No	To be presented to PMT in 2012
BASE system	No	Unknown
Paint Concrete Portions of Bridge/Bike Path	No	To be presented to PMT in 2012
Railing Connections (Post to Deck) and service platform handrail modifications	Yes	Included in Skyway Cleanup Risk in program-level risk register
Bike Path Railing (Tighten Fabrication Tolerances)	No	Included in SAS Change Order Log
Soffit Lighting over Southgate Road	No	Include in YBI #2
Skyway Bike Path Expansion Joint	No	Revised design to be presented to TBPOC in May
Additional work on Skyway	No	Scope of work being prepared.
Temporary Bike Path Access	No	See Note 1 below

- Are not currently included in the corridor RMC or resulting corridor forecasts, unless approved by TBPOC and quantified in a risk register.
- The magnitude of total costs of all listed potential improvements, if approved by the TBPOC, may result in a significant increase to the potential draw on program contingency indicated in this report

Questions?

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Andrew Fremier, Deputy Director, BATA

RE: Agenda No. - 3b
Item- Progress Reports
Project Progress and Financial Update May 2011

Recommendation:
APPROVAL

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
Included in this package is the Project Progress and Financial Update May 2011. By meeting time, the PMT would have approved the report under a delegated TBPOC authority. TBPOC confirmation of this approval is requested.

Attachment(s):
Project Progress and Financial Update May 2011 (see end of binder)

San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs

May 2011
Project Progress and Financial Update

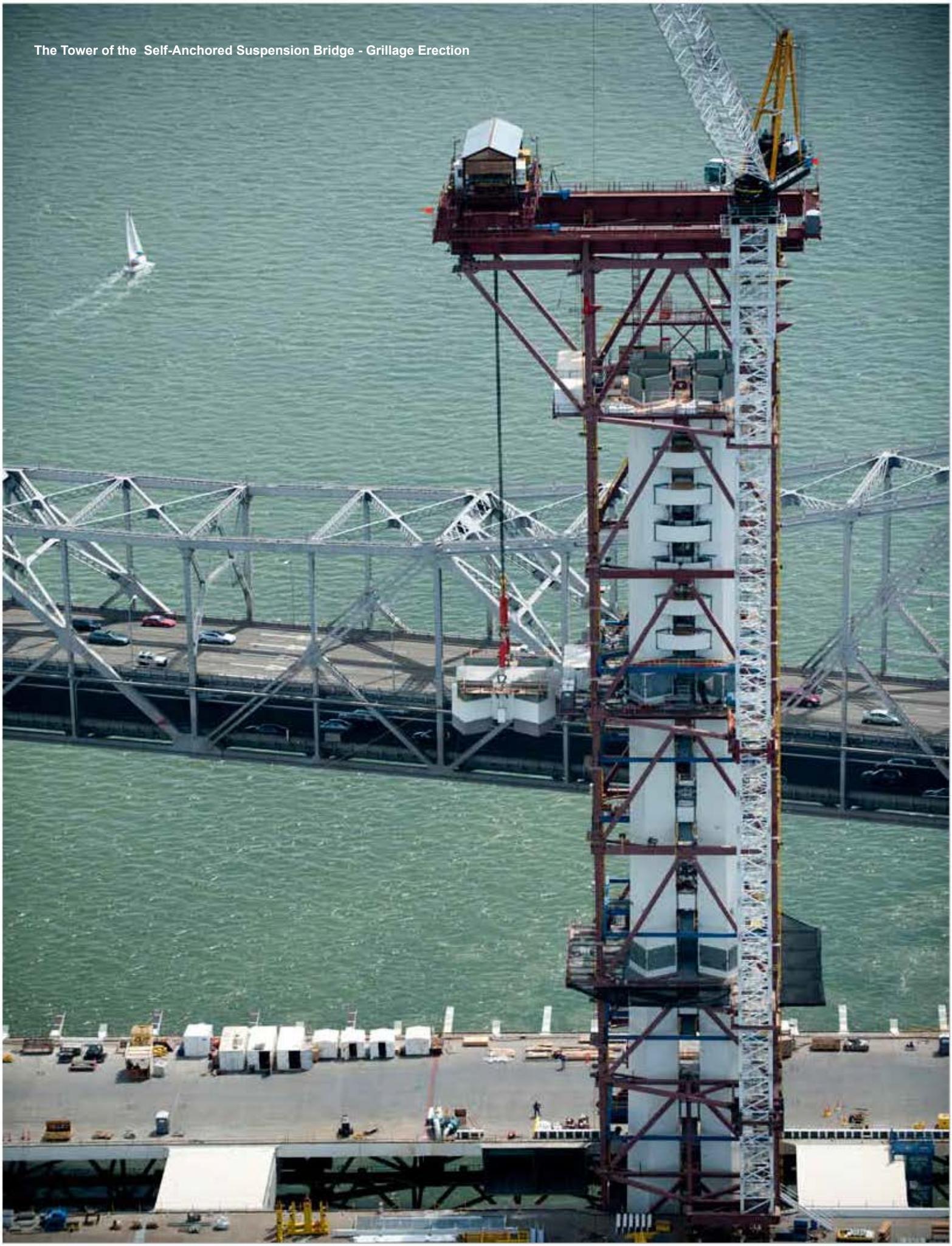
Draft Version 2.0

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

Released: June 2011

The New Self-Anchored Suspension Bridge Tower - Before Sunrise on Grillage Erection Day



The Tower of the Self-Anchored Suspension Bridge - Grillage Erection

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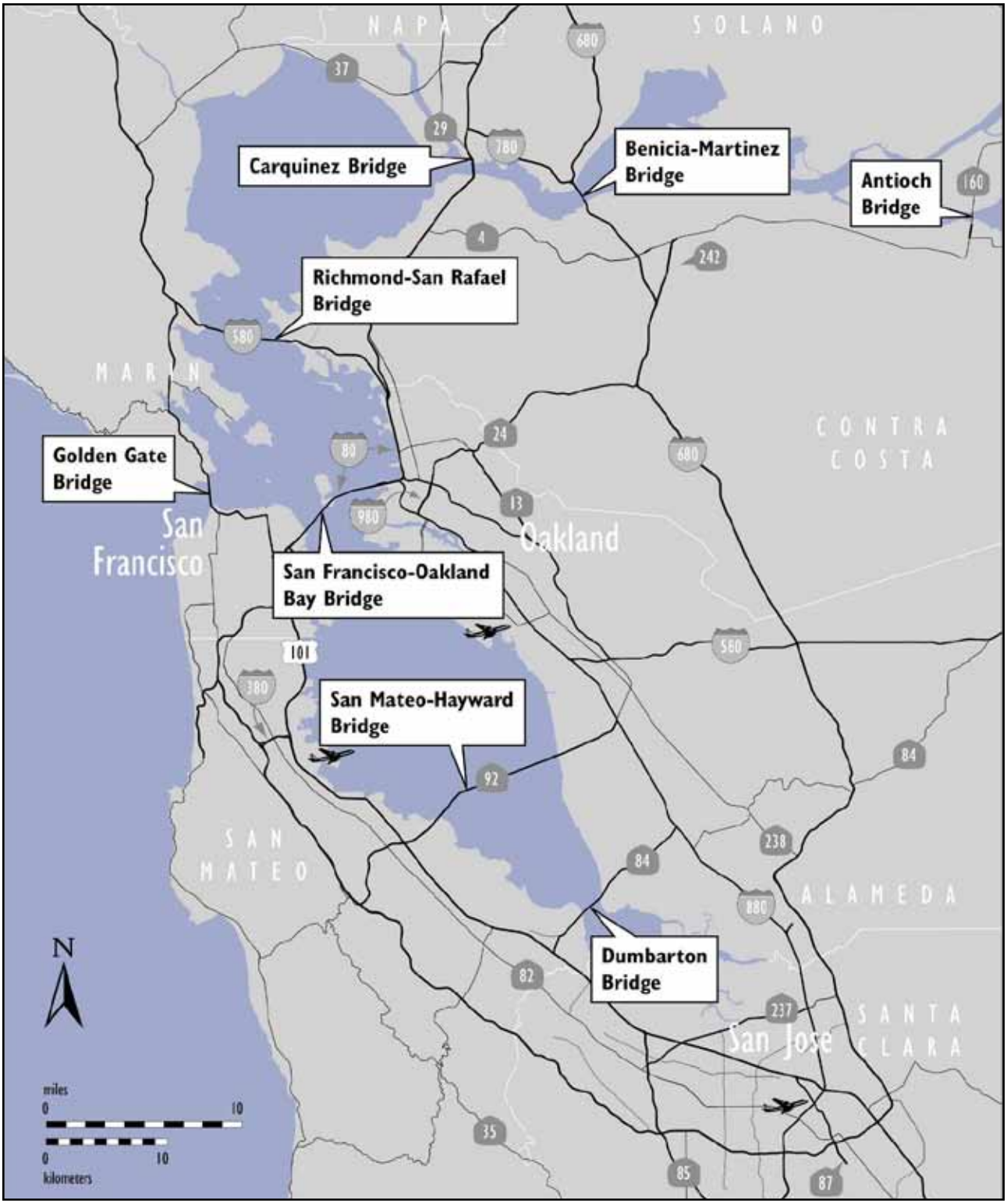
Map of Bay Area Toll Bridges



*** The Golden Gate Bridge is owned and operated by the Golden Gate Bridge, Highway, and Transportation District.**

Introduction

In July 2005, Assembly Bill (AB) 144 (Hancock) created the Toll Bridge Program Oversight Committee (TBPOC) to implement a project oversight and project control process for the new Benicia-Martinez Bridge and State Toll Bridge Seismic Retrofit Program projects. The TBPOC consists of the Director of Caltrans, the Executive Director of the Bay Area Toll Authority (BATA) and the Executive Director of the California Transportation Commission (CTC). The TBPOC's project oversight and control processes include, but are not limited to, reviewing bid specifications and documents, reviewing and approving significant change orders and claims in excess of $1 million (as defined by the Committee), and keeping the Legislature and others apprised of current project progress and status. In January 2010, Assembly Bill (AB) 1175 (Torlakson) amended the TBSRP to include the Antioch and Dumbarton Bridges seismic retrofit projects. The current Toll Bridge Seismic Retrofit Program is as follows:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
Dumbarton Bridge Seismic Retrofit	Construction
Antioch Bridge Seismic Retrofit	Construction
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Complete
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
1958 Carquinez Bridge Seismic Retrofit	Complete
1962 Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The New Benicia-Martinez Bridge is part of a larger program of toll-funded projects called the Regional Measure 1 (RM1) Toll Bridge Program under the responsibility of BATA and Caltrans. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans will continue to report on their progress as an informational item. The RM1 program includes:

Regional Measure 1 Projects	Open to Traffic Status
Interstate 880/State Route 92 Interchange Reconstruction	Construction
1962 Benicia-Martinez Bridge Reconstruction	Open
New Benicia-Martinez Bridge	Open
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Open
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open

SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS

Aerial View of the Existing Bridge in Foreground and the Tower Grillage being Erected into Place on the New Self-Anchored Suspension Bridge Tower

Looking Up at the Self-Anchored Suspension Bridge and the New Tower

Aerial View of the Tower Grillage Being Installed

Toll Bridge Seismic Retrofit Program Risk Management

A major element of the 2005 AB144, the law creating the TBPOC, was legislative direction to implement a more aggressive risk management program. Such a program has been implemented in stages over time to ensure development of a robust and comprehensive approach to risk management.

A comprehensive risk assessment is performed for each project in the program on a quarterly basis. Based upon those assessments, a forecast is developed using the average cost of risk. These forecasts can both increase and decrease as risks are identified, resolved or retired. Nonetheless, assurances have been made that the public is informed of the risks that have been identified and the possible expense they could necessitate.

As of the end of the first quarter of 2011, the 50 percent probable draw on the current $317 million budgeted program contingency is $164 million. The potential draw ranges from $50 million to $280 million. The current program contingency balance is sufficient to cover the cost of currently identified risks. Risk mitigation actions are continuously developed and implemented to reduce the potential draw on the program contingency.

San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Replacement Project

SAS Superstructure Contract

The prime contractor constructing the Self-Anchored Suspension (SAS) Bridge from the completed Skyway to Yerba Buena Island is a joint venture of American Bridge/Fluor (ABF). Significant progress is being made both in the Bay Area and around the world.

As of the end of April 2011, the first 22 of 28 steel roadway boxes and the tower grillage have been installed. The three remaining roadway boxes are in fabrication. Roadway boxes 12 east and west will ship in May 2011 and roadway boxes 13 and 14 east and west will ship in July 2011.

These boxes, fabricated in Shanghai, China, join other bridge components that have been arriving from around the country and the world. All bridge components undergo a rigorous quality review by the fabricator, ABF, and Caltrans to ensure that only bridge components that have been built in accordance to the specifications will be shipped.

In September 2010, the TBPOC negotiated a change to the contract with the contractor to address past challenges, mitigate delays, and to accelerate the remaining work through incentives and disincentives. The goal now is opening the bridge to traffic by December 2013. The change agreed to is a "seismic safety opening" of the bridge to traffic before non-essential systems, like architectural lighting or removal of unneeded temporary support structures, are completed.

Yerba Buena Island Detour Contract

The YBI temporary detour structure contract was completed in October 2010.

Yerba Buena Island Transition Structures #1 Contract

The YBITS#1 contract has been awarded to MCM Construction,Inc., the same contractor that completed the Oakland Touchdown (OTD) #1 contract. MCM mobilized in September 2010, and has had total access to the area since October 1, 2010. The MCM contract includes completing the remaining foundations and the bridge deck structure from the Yerba Buena Island Tunnel to the self-anchored suspension bridge.

The TBPOC has negotiated an acceleration change order with the YBITS #1 contractor to ensure a simultaneous eastbound and westbound opening of the bridge by December 2013. BATA was requested to fund the acceleration plan from the program contingency in March 2011.

Aerial View Overlooking YBITS #1 Westbound Falsework and Formwork and Rebar Placement Progress on Right and Existing Bridge

SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS

Oakland Detour North Abutment Formwork

Oakland Detour EBMUD Outfall Bridge Planks & Structural Steel Support Installed

Antioch Bridge - Pier 33 Bearing Installation

Oakland Touchdown #1 Contract

The Oakland Touchdown (OTD) #1 contractor, MCM Construction completed the work on June 8, 2010. The contract constructed the westbound approach from the toll plaza to the Skyway structure and the portion of the eastbound approach that is not in conflict with the existing bridge structure.

Oakland Detour

To provide for the opportunity to achieve the eastbound and westbound opening of the bridge by December 2013, the TBPOC has approved and funded from the program contingency (beginning in March 2011) an acceleration plan that will construct a detour at the Oakland end of the bridge to allow for expedited construction of the OTD #2 contract. The detour realigns the bridge approach to the south to allow for construction of the remaining portion of OTD #2 that was in conflict with the existing bridge. The eastbound detour is forecast to be completed by the end of May 2011 and the westbound detour at the beginning of 2012.

Oakland Touchdown #2 Contract

The OTD #2 contract for construction will be advertised in October 2011 and awarded in April 2012.

Antioch Bridge Seismic Retrofit

The major retrofit strategy for the bridge includes installing seismic isolation bearings at each of the 41 piers, strengthening piers 12 through 31 with steel cross-bracing between column bents and installing steel casings at all columns located at the Sherman Island approach slab bridge. See project progress on page 34.

Dumbarton Bridge Seismic Retrofit

The Dumbarton bridge is a combination of three bridge types; reinforced concrete slab approaches supported on multiple pile extension columns, precast - prestressed concrete girders, and steel box girders supported on reinforced concrete piers. The retrofit strategy for the bridge includes superstructure and deck modifications and installation of isolation bearings. See project progress on page 36.

Dumbarton Bridge - Falsework for Approach Spans Bent Cap Expansion

Aerial View of the Dumbarton Bridge

92/880 NWCONN Bridge Construction

TBSRP Capital Outlay Support

The capital outlay support (COS) budget, originally established as a part of AB 144 in 2005, was based on a schedule that assumed bridge opening in 2012. After the SAS contract was rebid, interested contractors requested an additional year to be added to the schedule. To ensure a competitive bidding pool, the TBPOC changed the approved schedule to reflect bridge opening in 2013, but delayed increasing the COS budget to cover the project extension with the belief that an accelerated early completion was still possible and that COS costs could be contained. Since that time, early completion has not materialized and the TBPOC has subsequently approved COS budget increases to be funded from the COS reserves set aside within the original program contingency for project extensions or delays. Opportunities to economize and reduce costs in this area will continue to be pursued. However, additional COS is forecast to be needed from the program contingency.

TBSRP Programmatic Risks

This category includes risks that are not yet scoped within existing contracts and/or that spread across multiple contracts. The interdependencies between all of the contracts in the program result in the potential for one contract's delay to impact the entire program that are accounted for in the net programmatic risks.

Regional Measure 1 Toll Bridge Program (RM1)

Interstate 880/State Route 92 Interchange Reconstruction Project

The project is forecast to be substantially completed in September 2011, pending weather or unforeseen construction delays. Caltrans opened the eastbound 92 to northbound 880 connector on April 23, 2011.

Toll Bridge Seismic Retrofit Program Cost Summary

	Contract Status	AB 144/SB 66 Budget (July 2005)	TBPOC Approved Changes	Current TBPOC Approved Budget (April 2011)	Cost to Date (March 2011)	Current Cost Forecast (April 2011)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
SFOBB East Span Seismic Replacement								
Capital Outlay Construction								
Skyway	Completed	1,293.0	(38.9)	1,254.1	1,237.0	1,245.2	(8.9)	●
SAS Marine Foundations	Completed	313.5	(32.6)	280.9	274.8	278.6	(2.3)	●
SAS Superstructure	Construction	1,753.7	293.1	2,046.8	1,473.4	2,085.1	38.3	●
YBI Detour	Completed	131.9	360.9	492.8	465.7	482.8	(10.0)	●
YBI Transition Structures (YBITS)		299.3	(60.8)	238.5	23.6	300.0	61.5	●
YBITS 1	Construction			176.2	23.6	228.8	52.6	●
YBITS 2	Design			*59.0*	-	67.9	8.9	●
YBITS Landscaping	Design			*3.3*	-	3.3	-	●
Oakland Touchdown (OTD)		283.8	55.2	339.0	210.5	334.8	(4.2)	●
OTD 1	Completed			*212.0*	*202.6*	203.3	(8.7)	●
OTD 2	Design			*62.0*	-	59.9	(2.1)	●
Detour	Construction			51.0	-	57.6	*6.6*	●
OTD Electrical Systems	Design			*4.4*	-	*4.4*	-	●
Submerged Electric Cable	Completed			*9.6*	*7.9*	*9.6*	-	●
Existing Bridge Demolition	Design	239.2	(0.1)	239.1	-	234.9	(4.2)	●
Stormwater Treatment Measures	Completed	15.0	3.3	18.3	16.7	18.3	-	●
Other Completed Contracts	Completed	90.4	(0.1)	90.3	89.9	90.4	0.1	●
Capital Outlay Support		959.3	218.0	1,177.3	941.9	1,295.9	118.6	●
Right-of-Way and Environmental Mitigation		72.4	-	72.4	51.3	80.4	8.0	●
Other Budgeted Capital		35.1	(3.3)	31.8	0.7	7.7	(24.1)	●
Total SFOBB East Span Replacement		**5,486.6**	**794.7**	**6,281.3**	**4,785.5**	**6,454.1**	**172.8**	
Antioch Bridge Seismic Retrofit								
Capital Outlay Construction and Mitigation	Construction		70.0	70.0	19.7	60.5	(9.5)	●
Capital Outlay Support			31.0	31.0	18.8	35.3	4.3	●
Total Antioch Bridge Seismic Retrofit			**101.0**	**101.0**	**38.5**	**95.8**	**(5.2)**	
Dumbarton Bridge Seismic Retrofit								
Capital Outlay Construction and Mitigation	Construction		92.7	92.7	9.5	92.5	(0.2)	●
Capital Outlay Support			56.0	56.0	25.3	56.0	-	●
Total Dumbarton Bridge Seismic Retrofit		**-**	**148.7**	**148.7**	**34.8**	**148.5**	**(0.2)**	
Other Program Projects		**2,268.4**	**(64.6)**	**2,203.8**	**2,159.5**	**2,191.7**	**(12.1)**	●
Miscellaneous Program Costs		**30.0**	**-**	**30.0**	**25.5**	**30.0**	**-**	●
Net Programmatic Risks		-	-	-	**-**	**8.6**	**8.6**	●
Program Contingency		**900.0**	**(582.8)**	**317.2**	**-**	**153.3**	**(163.9)**	●
Total Toll Bridge Seismic Retrofit Program[2]		**8,685.0**	**397.0**	**9,082.0**	**7,043.8**	**9,082.0**	**-**	

● Within approved schedule and budget
● Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
● Known project impacts with forthcoming changes to approved schedules and budgets
[2] Figures may not sum up to totals due to rounding effects.

Toll Bridge Seismic Retrofit Program Schedule Summary

	AB144/SB 66 Project Completion Schedule Baseline (July 2005)	TBPOC Approved Changes (Months)	Current TBPOC Approved Completion Schedule (April 2011)	Current Completion Forecast (April 2011)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i=g+h	j	k=j-i	l	
SFOBB East Span Seismic Replacement							
Contract Completion							
Skyway	Apr 2007	8	Dec 2007	Dec 2007	-	●	See Page 30
SAS Marine Foundations	Jun 2008	(5)	Jan 2008	Jan 2008	-	●	See Page 18
SAS Superstructure	Mar 2012	29	Aug 2014	Aug 2014	-	●	See Page 19
YBI Detour	Jul 2007	41	Dec 2010	Oct 2010	(2)	●	See Page 15
YBI Transition Structures (YBITS)	Nov 2013	12	Nov 2014	Mar 2015	4		See Page 16
YBITS 1			Sep 2013	Dec 2013	3	●	
YBITS 2			Nov 2014	Mar 2015	4	●	
YBITS Landscaping			TBD	TBD	-	●	
Oakland Touchdown	Nov 2013	12	Nov 2014	Nov 2014	-		See Page 31
OTD 1			Jun 2010	Jun 2010	-	●	
OTD 2			Nov 2014	Nov 2014	-	●	
OTD Electrical Systems			TBD	TBD	-	●	
Submerged Electric Cable			Jan 2008	Jan 2008	-	●	
Existing Bridge Demolition	Sep 2014	12	Sep 2015	Dec 2015	3	●	
Stormwater Treatment Measures	Mar 2008		Mar 2008	Mar 2008	-	●	
SFOBB East Span Bridge Opening and Other Milestones							
Westbound Seismic Safety Open	Sep 2011	27	Dec 2013	Dec 2013	-	●	
Eastbound Seismic Safety Open	Sep 2012	15	Dec 2013	Dec 2013	-		
Oakland Detour Eastbound Open			May 2011	May 2011	-	●	
Oakland Detour Westbound Open			Feb 2012	Feb 2012	-	●	
OTD Westbound Access			Aug 2009	Aug 2009	-	●	
YBI Detour Open			Sep 2009	Sep 2009	-	●	See Page 15
Antioch Bridge Seismic Retrofit							
Contract Completion			Aug 2012	May 2012	(3)	●	See Page 34
Dumbarton Bridge Seismic Retrofit							
Contract Completion			Sep 2013	Sep 2013	-	●	See Page 36

Regional Measure 1 Program Cost Summary

	Contract Status	BATA Baseline Budget (July 2005)	BATA Approved Changes	Current BATA Approved Budget (April 2011)	Cost to Date (April 2011)	Current Cost Forecast (April 2011)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
Interstate 880/Route 92 Interchange Reconstruction								
Capital Outlay Construction	Construction	94.8	66.2	161.0	128.1	161.0	-	●
Capital Outlay Support		28.8	35.8	64.6	58.7	64.6	-	●
Capital Outlay Right-of-Way		9.9	7.0	16.9	12.4	16.9	-	●
Project Reserve		0.3	2.2	2.5	-	2.5	-	
Total I-880/SR-92 Interchange Reconstruction		**133.8**	**111.2**	**245.0**	**199.2**	**245.0**	-	
Other Completed Program Projects		**1,978.8**	**182.6**	**2,161.4**	**2,088.0**	**2,161.4**	-	
Total Regional Measure 1 Toll Bridge Program [1]		**2,112.6**	**293.8**	**2,406.4**	**2,287.2**	**2,406.4**	-	

● Within approved schedule and budget
● Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
● Known project impacts with forthcoming changes to approved schedules and budgets
[1] Figures may not sum up to totals due to rounding effects.

Regional Measure 1 Program Schedule Summary

	BATA Baseline Completion Schedule (July 2005)	BATA Approved Changes (Months)	Current BATA Approved Completion Schedule (April 2011)	Current Completion Forecast (April 2011)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i=g+h	j	k=j-i	l	
Interstate 880/Route 92 Interchange Reconstruction							
Contract Completion							
Interchange Reconstruction	Dec 2010	9	Jun 2011	Sep 2011	3	●	See Page 42

Self-Anchored Suspension Bridge - Tower Grillage Being Lifted into Place

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge Seismic Retrofit Strategy

When a 250-ton section of the upper deck of the East Span collapsed during the 7.1-magnitude Loma Prieta Earthquake in 1989, it was a wake-up call for the entire Bay Area. While the East Span quickly reopened within a month, a critical question lingered: How could the Bay Bridge—a vital regional lifeline structure—be strengthened to withstand the next major earthquake? Seismic experts from around the world determined that to make each separate element seismically safe on a bridge of this size, the work must be divided into numerous projects. Each project presents unique challenges. Yet there is one common challenge — the need to accommodate the more than 280,000 vehicles that cross the bridge each day.

West Approach Overview

West Approach Seismic Replacement Project
Project Status: Completed 2009

Seismic safety retrofit work on the West Approach in San Francisco, bounded on the west by 5th Street and on the east by the anchorage of the west span at Beale Street, involved completely removing and replacing this one-mile stretch of Interstate 80, as well as six on- and off-ramps within the confines of the West Approach's original footprint. This project was completed on April 8, 2009.

West Span Seismic Retrofit Project
Project Status: Completed 2004

The West Span lies between Yerba Buena Island and San Francisco and is made up of two complete suspension spans connected at a center anchorage. Retrofit work included adding massive amounts of steel and concrete to strengthen the entire West Span, along with new seismic shock absorbers and bracing.

San Francisco-Oakland Bay Bridge West Span

East Span Seismic Replacement Project
Project Status: Construction

Rather than a seismic retrofit, the two-mile long East Span is being completely rebuilt. When completed, the new East Span will consist of several different sections, but will appear as a single streamlined span. The eastbound and westbound lanes of the East Span will no longer include upper and lower decks. The lanes will instead be parallel, providing motorists with expansive views of the bay. These views will also be enjoyed by bicyclists and pedestrians, thanks to a new bike path on the south side of the bridge that will extend all the way to Yerba Buena Island. The new span will be aligned north of the existing bridge to allow traffic to continue to flow on the existing bridge as crews build the new span.

The new span will feature the world's longest Self-Anchored Suspension (SAS) bridge that will be connected to an elegant roadway supported by piers (Skyway), which will gradually slope down toward the Oakland shoreline (Oakland Touchdown). A new transition structure on Yerba Buena Island (YBI) will connect the SAS to the YBI Tunnel and will transition the East Span's side-by-side traffic to the upper and lower decks of the tunnel and West Span.

When construction of the new East Span is complete and vehicles have been safely rerouted to it, the original East Span will be demolished.

Architectural Rendering of the New East Span of the San Francisco-Oakland Bay Bridge

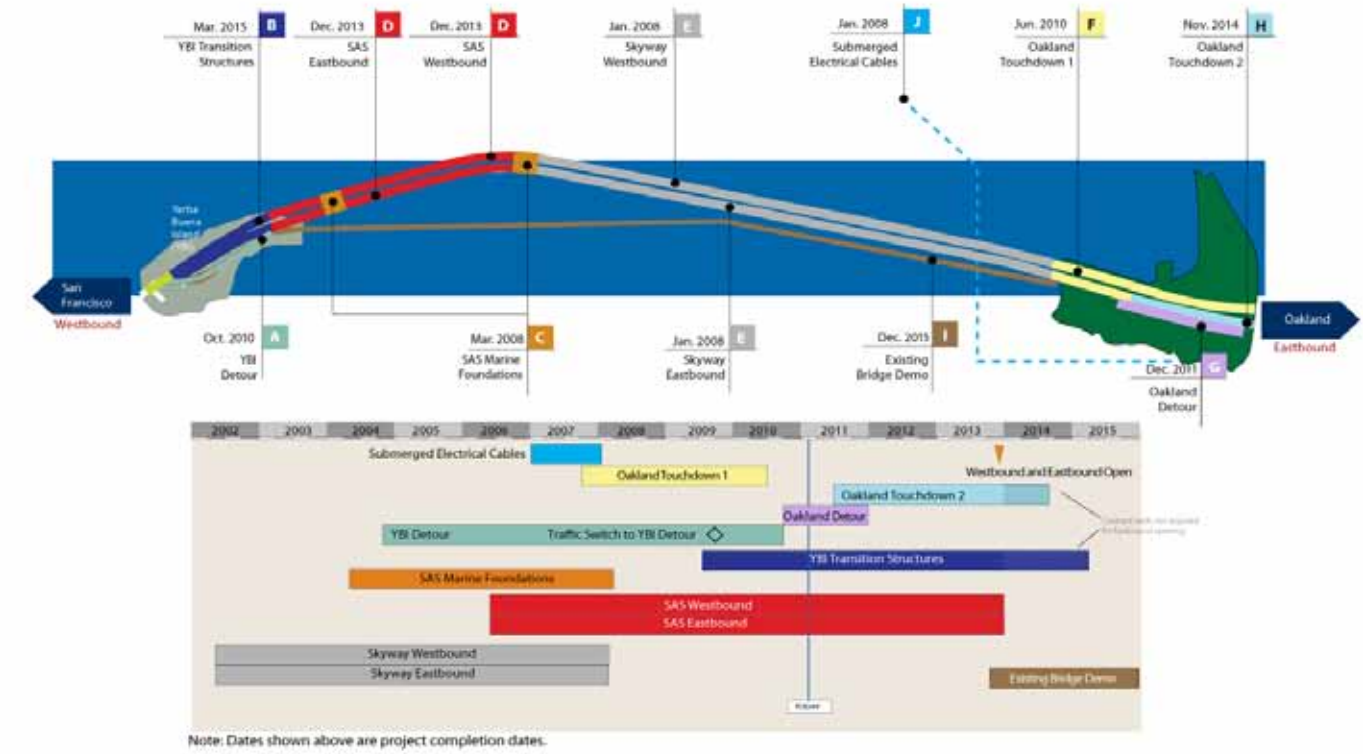
TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project Summary

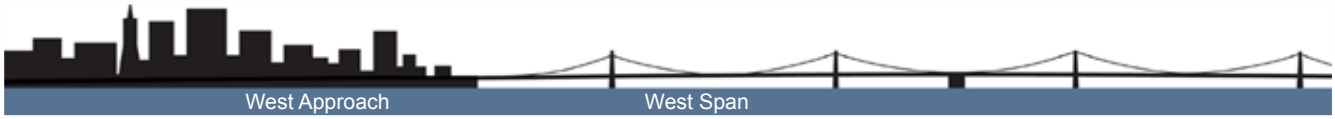
The new East Span bridge can be split into four major components—the Skyway and the Self-Anchored Suspension bridge in the middle and the Yerba Buena Island Transition Structures and Oakland Touchdown approaches at either end. Each component is being constructed by one to three separate contracts that have been sequenced together to reduce schedule risk.

Highlighted below are the major East Span contracts and their schedules. The letter designation before each contract corresponds to contract descriptions in the report.

SFOBB East Span Work Sequence



Note: Dates shown above are project completion dates.



TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Yerba Buena Island Detour (YBID)

As with all of the Bay Bridge's seismic retrofit projects, crews must build the Yerba Buena Island Transition Structures (YBITS) without disrupting traffic. To accomplish this task, YBID eastbound and westbound traffic was shifted off the existing roadway and onto a temporary detour on Labor Day weekend 2009. Drivers will use this detour, just south of the original roadway, until traffic is moved onto the new East Span.

A YBID Contract

Contractor: C.C. Myers, Inc.

Approved Capital Outlay Budget: $492.8 M

Status: Completed October 2010

This contract was originally awarded in early 2004 to construct the detour structure for the planned 2006 opening of the new East Span. Due to the re-advertisement of the SAS Superstructure contract in 2005 because of a lack of funding at the time, the bridge opening was rescheduled to 2013. To better integrate the contract into the current East Span schedule and to improve seismic safety and mitigate future construction risks, the TBPOC has approved a number of changes to the contract, including adding the deck replacement work near the tunnel that was rolled into place over Labor Day weekend 2007, advancing future transition structure foundation work and making design enhancements to the temporary detour structure. These changes have increased the budget and forecast for the contract to cover the revised project scope and reduce project risks.

Status: Completed.

YBI East Tie-In Rolled in on Labor Day 2009 Weekend

West Tie-In Phase #1 Rolled in on Labor Day Weekend 2007

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Yerba Buena Island Transition Structures (YBITS)

The new Yerba Buena Island Transition Structures (YBITS) will connect the new SAS bridge span to the existing Yerba Buena Island Tunnel, transitioning the new side-by-side roadway decks to the upper and lower decks of the tunnel. The new structures will be cast-in-place reinforced concrete structures that will look very similar to the already constructed Skyway structures. While some YBITS foundations and columns have been advanced by the YBID contract, the remaining work will be completed under three separate YBITS contracts.

YBITS #1 Westbound Frame 2 Falsework and Formwork

B YBITS #1 Contract

Contractor: MCM Construction, Inc.

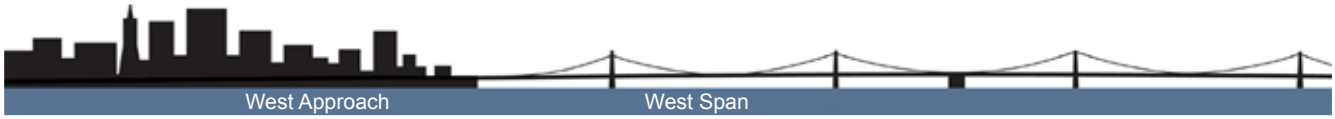
Approved Capital Outlay Budget: $176.2 M

Status: 21% Complete as of April 2011

The YBITS #1 contract will construct the mainline roadway structure from the SAS bridge to the YBI tunnel. On February 4, 2010, Caltrans awarded the YBITS #1 Contract to MCM Construction, Inc.

Status: Construction continues on the installation of the access trestle eastbound and westbound footings and columns. The TBPOC negotiated an acceleration change order with the YBITS #1 contractor to ensure a simultaneous eastbound and westbound opening of the bridge by December 2013. BATA is funding the acceleration plan from the program contingency.

Rendering of Overview of Future Yerba Buena Island Transition Structures in Progress (top) with Completed Detour Viaduct (bottom)



YBITS #2 Contract

Contractor: TBD

Approved Capital Outlay Budget: $59.0 M

Status: In Design

The YBITS #2 contract will demolish the detour viaduct after all traffic is shifted to the new bridge and will construct a new eastbound on-ramp to the bridge in its place. The new ramp will also provide the final link for bicycle/pedestrian access off the SAS bridge onto Yerba Buena Island.

YBITS Landscaping Contract

Contractor: TBD

Approved Capital Outlay Budget $3.3M

Status: In Design

Upon completion of the YBITS work, a follow-on landscaping contract will be executed to replant and landscape the area.

Yerba Buena Island Transition Structures Advanced Work

Due to the re-advertisement of the SAS superstructure contract in 2005, it became necessary to temporarily suspend the detour contract and make design changes to the viaduct. To make more effective use of the extended contract duration and to reduce overall project schedule and construction risks, the TBPOC approved the advancement of foundation and column work from the Yerba Buena Island Transition Structures contract.

Status: The YBID contractor completed the YBITS advanced substructure work in October 2010.

Yerba Buena Island Transition Structures #1 Westbound Falsework, Formwork and Rebar Placement Progress Looking West

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project Self-Anchored Suspension (SAS) Bridge

If one single element bestows world class status on the new Bay Bridge East Span, it is the Self-Anchored Suspension (SAS) bridge. This engineering marvel will be the world's largest SAS span at 2,047 feet in length, as well as the first bridge of its kind built with a single tower.

The SAS was separated into three separate contracts— construction of the land-based foundations and columns at pier W2; construction of the marine-based foundations and columns at piers T1 and E2; and construction of the SAS steel superstructure, including the tower, roadway, and cabling. Construction of the foundations at pier W2 and at piers T1 and E2 was completed in 2004 and 2007, respectively.

Self-Anchored Suspension Bridge Tower Grillage Being Lifted into Place

SAS Land Foundation Contract

Contractor: West Bay Builders, Inc.
Approved Capital Outlay Budget: $26.4 M
Status: Completed October 2004

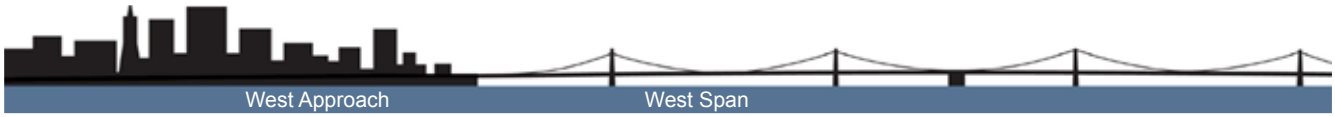
The twin W2 columns on Yerba Buena Island provide essential support for the western end of the SAS bridge, where the single main cable for the suspension span will extend down from the tower and wrap around and under the western end of the roadway deck. Each of these huge columns required massive amounts of concrete and steel and are anchored 80 feet into the island's solid bedrock.

C SAS Marine Foundations Contract

Contractor: Kiewit/FCI/Manson, Joint Venture
Approved Capital Outlay Budget: $280.9 M
Status: Completed January 2008

Construction of the piers at E2 and T1 required significant on-water resources to drive the foundation support piles down, not only to bedrock, but also through the bay water and mud (see rendering on facing page).

The T1 foundation piles extend 196 feet below the waterline and are anchored into bedrock with heavily reinforced concrete rock sockets that are drilled into the rock. Driven nearly 340 feet deep, the steel and concrete E2 foundation piles were driven 100 feet deeper than the deepest timber piles of the existing east span in order to get through the bay mud and reach solid bedrock.



D SAS Superstructure Contract

Contractor: American Bridge/Fluor Enterprises, Joint Venture
Approved Capital Outlay Budget: $2.05 B
Status: 69% Complete as of April 2011

The SAS bridge is not just another suspension bridge. Rising 525 feet above mean sea level and embedded in rock, the single-tower SAS span is designed to withstand a massive earthquake. Traditional main cable suspension bridges have twin cables with smaller suspender cables connected to them. While there will appear to be two main cables on the SAS, there will actually only be one. This single cable will be anchored within the eastern end of the roadway, carried over the tower and then wrapped around the two side-by-side decks at the western end. The single-steel tower will be made up of four separate legs connected by shear link beams which function much like a fuse in an electrical circuit. These beams will absorb most of the impact from an earthquake, preventing damage to the tower legs.

The next several pages highlight the construction sequence of the SAS and are followed by detailed updates on specific construction activities.

Architectural Rendering of New Self-Anchored Suspension Span and Skyway

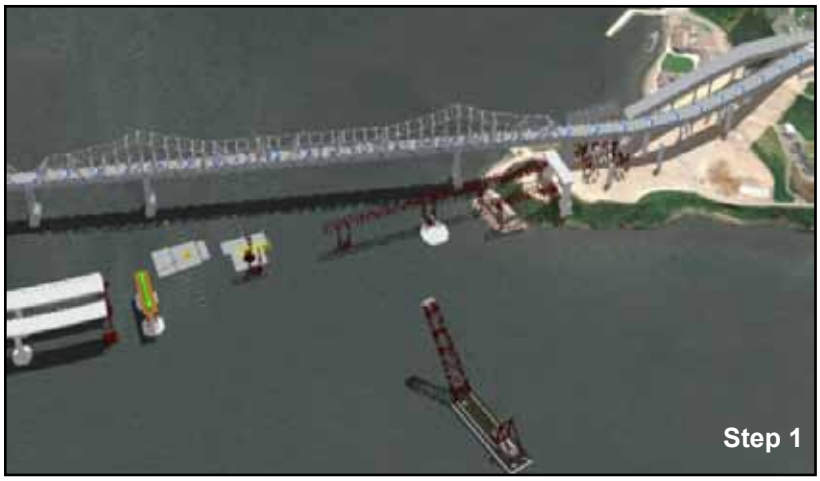
TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Self-Anchored Suspension (SAS) Construction Sequence

STEP 1 - CONSTRUCT TEMPORARY SUPPORT STRUCTURES

Temporary support structures will need to be erected from the Skyway to Yerba Buena Island to support the new SAS bridge during construction.

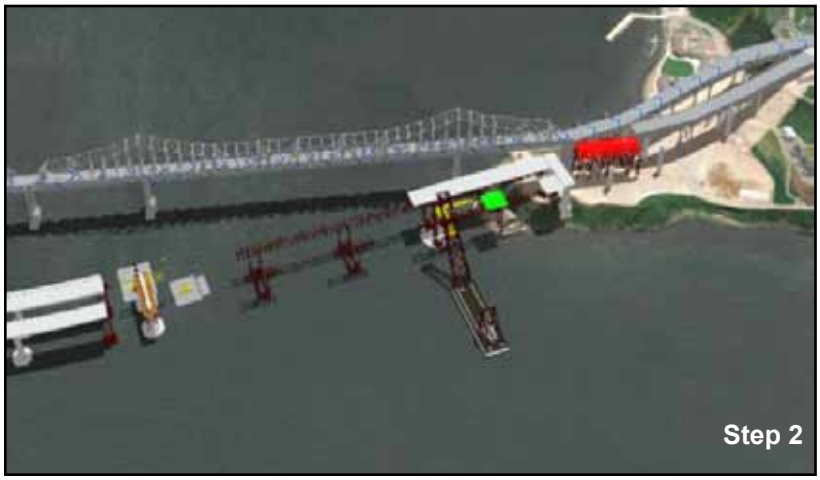
Status: Foundations and temporary support structures were completed in mid-September 2010.



STEP 2 - INSTALL ROADWAYS

The roadway boxes are being lifted into place by using the shear-leg crane barge. The boxes are being bolted and welded together atop the temporary support trusses to form two continuous parallel steel roadway boxes.

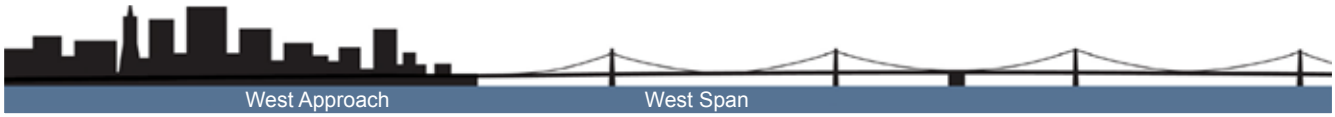
Status: Twenty-two of 28 roadway boxes have been erected. Fifteen crossbeams have been installed between the roadway boxes. Roadway boxes 12 east and west are in fabrication and are forecast for shipment in May 2011. Roadway boxes 13 and 14 east and west are in fabrication and are expected to ship in July 2011.



STEP 3 - INSTALL TOWER

Each of the four legs of the tower will be erected in four separate lifts. The four tower lifts, the grillage and the tower head will be installed using a temporary erection tower and lifting jacks.

Status: The tower grillage was lifted into position in mid-April. The tower saddle is scheduled for installation in May 2011 and the tower head is in fabrication and is scheduled for shipment in May 2011.



STEP 4 - MAIN CABLE AND SUSPENDER INSTALLATION

The main cable will be pulled from the east end of the SAS bridge, over the tower, and wrapped around pier W2 and again back over the tower and to the east end of the SAS bridge deck. Suspender cables will be added to lift the roadway decks off the temporary support structure.

Status: Cable installation is pending the erection of the tower and completion of roadway spans. All cables have been fabricated, shipped and stored in the warehouse at Pier 7 in Oakland. Cable bands are expected to be completed and shipped in June 2011. Erection of suspender brackets continues.

STEP 5 - WESTBOUND AND EASTBOUND SEISMIC SAFETY OPENING

The new bridge will now open simultaneously in both the westbound and eastbound directions.

Status: The westbound and eastbound opening is forecast for the end of 2013.

Aerial View of Current Progress on the Self-Anchored Suspension Bridge

Self-Anchored Suspension (SAS) Superstructure Fabrication Activities

Roadway and Tower Segments

Like giant three-dimensional jigsaw puzzles, the roadway and tower lifts of the SAS bridge are hollow steel shells that are internally strengthened and stiffened by a highly engineered network of welded steel ribs and diaphragms. The use of steel in this manner allows for a strong and yet relatively light and flexible structure to withstand the massive loads placed on the bridge during seismic events.

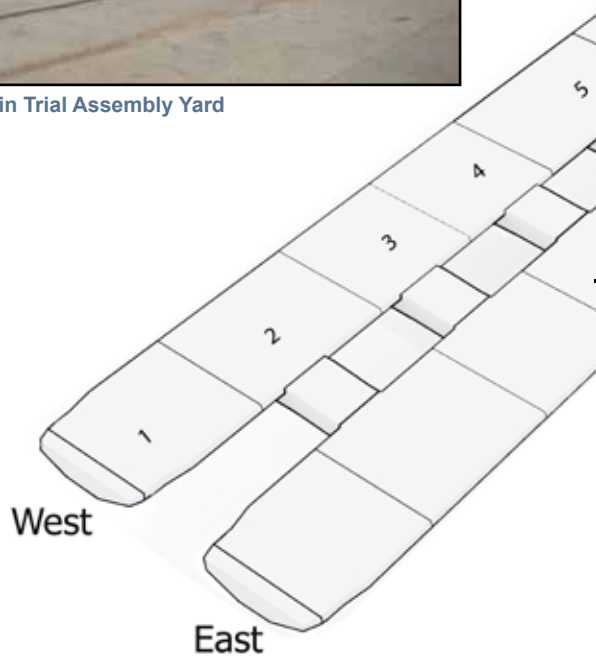
All components undergo a rigorous quality review by ZPMC, ABF, and Caltrans to ensure that only bridge components that have been built according to contract specifications will be shipped.

Roadway Box Fabrication Status: As shown in the diagram to the right, roadway boxes 1 through 11 east and west have been fabricated and shipped to the Bay Area. Roadway boxes 12 east and west are in fabrication and are forecast to ship in May 2011. Fabrication of sub-assemblies for roadway boxes 13 and 14 are ongoing and are forecast to be completed and shipped in July 2011.

Tower Fabrication Status: The tower head facade is in fabrication and scheduled to be shipped to Oakland in May 2011.

Roadway Box 13 and 14 in Trial Assembly Yard

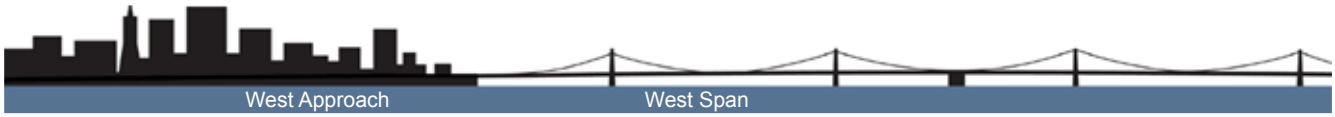
Last Sections of Bike Path



Legend

- Shop Drawings Underway
- Sub-Assemblies Fabrication
- Segment Assembly
- Blast, Paint & Fit Up
- Ready To Ship/In Transit
- On Site/In Place

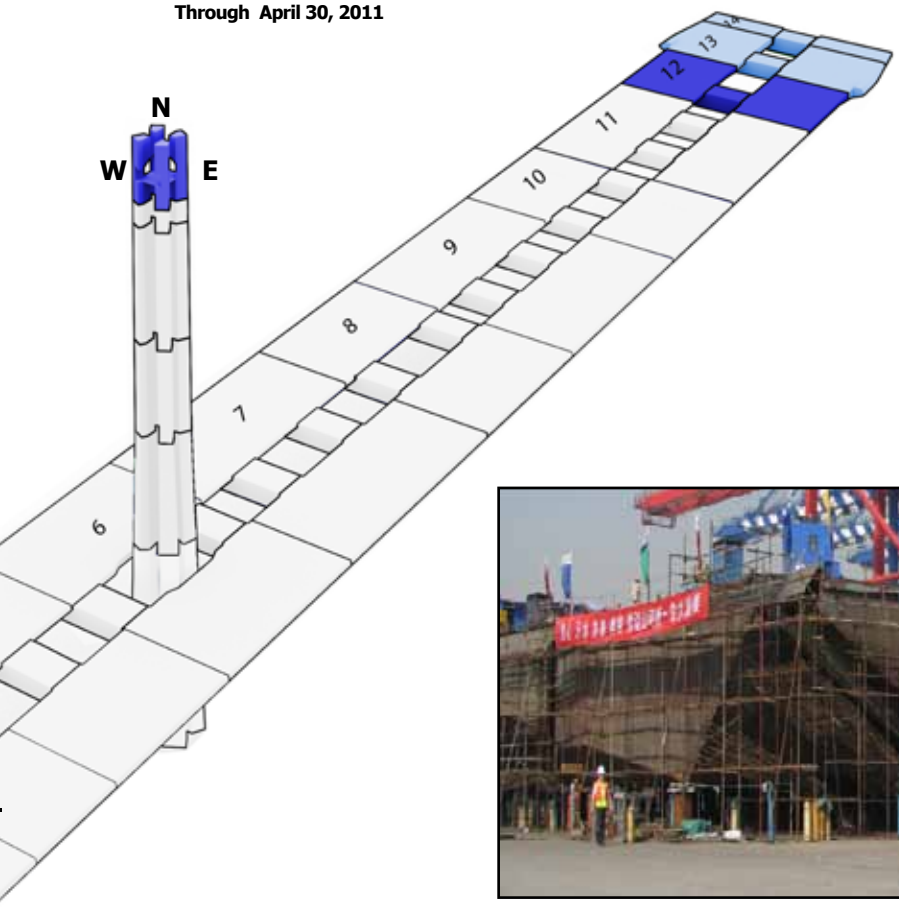
Through April 30, 2011



TROFIT PROGRAM

Fabrication Progress Diagram

Through April 30, 2011



Lift 14 East and West

Lift 13 in Trial Assembly

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Self-Anchored Suspension (SAS) Superstructure Fabrication Activities (cont.)

Cables and Suspenders

One continuous main cable will be used to support the roadway deck of the SAS bridge. The main cable will be anchored within the westbound roadway box at the east end of the SAS near pier E2, then extend west over the northeast saddle towards the tower saddle at T-1. It will then loop around pier W2 westbound deviation saddle, extend through the jacking beam saddle and extend around the eastbound deviation saddle at W2 over the tower saddle at T-1 again to the south east saddle and finally anchor within the eastbound roadway box near pier E2. The main cable will be made up of 137 bundles of wire strands. Connecting the roadway decks to the main cable will be a number of smaller suspender ropes, which will connect the roadway deck to the main cable. The main cable will be fabricated in China and the suspender cables in Missouri, USA.

Status: All main cables strands have been fabricated and delivered to the job site and stored at Pier 7 in Oakland. All cable bands are forecast to be completed and shipped to the job site by June 2011. The suspender ropes are in fabrication and the hand ropes have been shipped.

Saddles, Bearings, Hinges, and Other Bridge Components

The mounts on which the main cable and suspender ropes will sit are solid steel castings. Castings for the main cable saddles were made by Japan Steel Works, while the cable bands and brackets are being made by Goodwin Steel in the United Kingdom.

The bridge bearings and hinges that support, connect, and transfer loads from the Self-anchored Suspension (SAS) Span to the adjoining sections of the new east span are being fabricated in a number of locations. Work on the bearings is being performed in Pennsylvania, USA and Hochang, South Korea, while hinge pipe beams are being fabricated in Oregon, USA.

Status: The west and east deviation cable saddles, and jacking saddle and pipe beams have been fabricated and installed on the W2 cap beam. Hinge A seismic expansion is in fabrication and is currently scheduled for completion in November 2011. The SAS traveler and bike path are also in fabrication and are expected to be completed and shipped by July 2011.

Cable Band

Cable Band Installation Bolt Tensioning Testing

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Self-Anchored Suspension (SAS) Superstructure Field Activities

Shear-Leg Crane Barge in Process of Lifting Roadway Box 11 E

Temporary Support Structures with E2 Cap Beam and Completed Skyway in background

Pier W2 and Hinge K and West Deviation Saddle Installed

Shear-Leg Crane Barge

The massive shear-leg barge crane that is helping to build the SAS superstructure arrived in the San Francisco Bay on March 12, 2009 after a trans-Pacific voyage.

The crane and barge are separate units operating as a single entity named the “Left Coast Lifter.” The 400-by-100-foot barge is a U.S-flagged vessel that was custom built in Portland, Oregon by U.S. Barge, LLC and outfitted with the crane by Shanghai Zhenhua Heavy Industry Co. Ltd. (ZPMC) at a facility near Shanghai, China. The crane’s boom weighs 992 tons and is 328 feet long. The crane can lift up to 1,873 tons, including the deck and tower boxes for the SAS.

Status: The shear-leg crane barge arrived at the job site March 2009. The crane has off-loaded and placed all temporary support structures and SAS roadway boxes and crossbeams.

Temporary Support Structures

To erect the roadway decks and tower of the bridge, temporary support structures were first put in place. Almost a bridge in itself, the temporary support structures stretch from the end of the completed Skyway back to Yerba Buena Island. For the tower, a strand jack system is being built into the tower’s temporary frame to elevate the upper sections of the tower into place. These temporary supports are being fabricated in the Bay Area, as well as in Oregon and in China at ZPMC.

Status: The temporary support structures were completed in mid-September 2010.

Cap Beams

Construction of the massive steel-reinforced concrete cap beams that link the columns at piers W2 and E2 was left to the SAS superstructure contractor and represents the only concrete portions of work on that contract. The east and west ends of the SAS roadway will rest on the cap beams and the main cable will wrap around pier W2, while anchoring into the east end of the SAS deck sections near E2.

Status: Completed in March 2009

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Self-Anchored Suspension (SAS) Superstructure Roadway and Tower Box Installation Activities

Upon arrival in Oakland, the steel roadway and tower sections are off-loaded directly from the transport ship onto barges to await installation atop the temporary support structures. Steel roadway boxes will be installed from west to east. Due to the shallow waters near Yerba Buena Island, the eastbound lanes on the south side of the new bridge will be installed first, then to be followed by the westbound lanes. In total, there are 28 roadway boxes (14 in each direction) that range from 560 to 1660 tons and from 80 to 230 feet long.

The tower comprises four legs, each made up of four tower lifts that make up the majority of the height of the tower, the tower grillage, and finally the tower head.

Status: Twenty-two of 28 roadway boxes have been erected to form a continuous roadway. Welding and bolting continues on all roadway boxes. All four legs of the tower lifts along with the tower grillage have been installed as of mid-April, 2011. The tower head is in fabrication and is scheduled to ship in May 2011. Fabrication of roadway boxes 12,13 and 14 east and west are also in fabrication and are expected to be shipped in May and July 2011 along with cross beams 17, 18 and 19. The tower saddle has been trial fitted onto the grillage and is forecast for installation in May 2011.

Aerial View of the Self Anchored Suspension Bridge Tower with the Grillage Being Lifted into Place

Self-Anchored Suspension Bridge Tower Grillage Being Prepared for Assembly with Tower Saddle

Aerial View of the Self-Anchored Suspension Bridge's Tower with the Grillage Being Lifted into Place

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Skyway

The Skyway, which comprises much of the new East Span, will drastically change the appearance of the Bay Bridge. Replacing the gray steel that currently cages drivers, a graceful, elevated roadway supported by piers will provide sweeping views of the bay.

E Skyway Contract

Contractor: Kiewit/FCI/Manson, Joint Venture
Approved Capital Outlay Budget: $1.25 B
Status: Completed March 2008

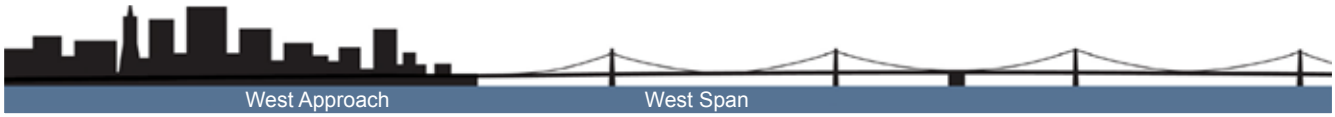
Extending for more than a mile across Oakland mudflats, the Skyway is the longest section of the East Span. It sits between the new Self-Anchored Suspension (SAS) span and the Oakland Touchdown. In addition to incorporating the latest seismic-safety technology, the side-by-side roadway decks of the Skyway feature shoulders and lane widths built to modern standards.

The Skyway's decks are composed of 452 pre-cast concrete segments (standing three stories high), containing approximately 200 million pounds of structural steel, 120 million pounds of reinforcing steel, 200 thousand linear feet of piling and about 450 thousand cubic yards of concrete. These are the largest segments of their kind ever cast and were lifted into place by custom-made winches.

The Skyway marine foundation consists of 160 hollow steel pipe piles measuring eight feet in diameter and dispersed among 14 sets of piers. The 365-ton piles were driven more than 300 feet into the deep bay mud. The new East Span piles were battered or driven in at an angle, rather than vertically, to obtain maximum strength and resistance.

Designed specifically to move during a major earthquake, the Skyway features several state-of-the-art seismic safety innovations, including 60-foot-long hinge pipe beams. These beams will allow deck segments on the Skyway to move, enabling the deck to withstand greater motion and to absorb more earthquake energy.

Overview of the Skyway Looking West toward Downtown San Francisco



TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Oakland Touchdown

When completed, the Oakland Touchdown (OTD) structures will connect Interstate 80 in Oakland to the new side-by-side decks of the new East Span. For westbound drivers, the OTD will be their introduction to the graceful new East Span. For eastbound drivers from San Francisco, this section of the bridge will carry them from the Skyway to the East Bay, offering unobstructed views of the Oakland hills.

The OTD will be constructed through two contracts. The first contract will build the new westbound lanes, as well as part of the eastbound lanes. The second contract to complete the eastbound lanes cannot fully begin until westbound traffic is shifted onto the new bridge. This enables a portion of the upper deck of the existing bridge to be demolished allowing for a smooth transition for the new eastbound lanes in Oakland.

F Oakland Touchdown #1 Contract

Contractor: MCM Construction, Inc.
Approved Capital Outlay Budget: $212.0 M
Status: Completed June 2010

The OTD #1 contract constructs the entire 1,000-foot-long westbound approach from the toll plaza to the Skyway. When open to traffic, the westbound approach structure will provide direct access to the westbound Skyway. In the eastbound direction, the contract will construct a portion of the eastbound structure and all of the eastbound foundations that are not in conflict with the existing bridge.

Status: MCM Construction, Inc. completed OTD #1 westbound and eastbound phase 1 on June 8, 2010.

G Oakland Detour

Contractor: MCM Construction, Inc.
Approved Capital Outlay Budget: $51.0 M
Status: In Construction

To ensure a simultaneous eastbound and westbound opening of the bridge by December 2013, the TBPOC has approved an acceleration plan that will construct a detour at the Oakland end of the bridge to allow for expedited construction of the OTD #2 contract. The detour realigns the bridge approach to the south to allow for construction of the remaining portion of OTD that was in conflict with the existing bridge.

Status: BATA began funding the detour and acceleration plan from the program contingency in March 2011. The eastbound detour is scheduled to open by the end of May 2011 and the westbound detour at the beginning of 2012. A full closure of the bridge is not expected at this time.

The Burma Road extension access has been completed. The Construction on the East Bay Municipal Utility District (EBMUD) outfall bridge started in March 2011 and opened to traffic on April 25, 2011.

H Oakland Touchdown #2 Contract

Contractor: TBD
Approved Capital Outlay Budget: $62.0 M
Status: In Design

The OTD #2 contract will complete the eastbound approach structure from the end of the Skyway to Oakland. This work is critical to the eastbound opening of the new bridge, by December 2013.

Status: The TBPOC has approved an acceleration plan that will construct a detour at the Oakland end of the bridge to allow for expedited construction of the OTD #2 contract. OTD #2 is currently in design and the contract for construction will be advertised in October 2011 and awarded in April 2012.

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Other Contracts

A number of contracts needed to relocate utilities, clear areas of archeological artifacts, and prepare areas for future work have already been completed. The last major contract will be the eventual demolition and removal of the existing bridge, which by that time will have served the Bay Area for nearly 80 years. Following is a status of some the other East Span contracts.

Archeological Investigations

East Span Interim Seismic Retrofit

Contractors: 1) California Engineering
2) Balfour Beatty

Approved Capital Outlay Budget: $30.8 M

Status: Completed October 2000

After the 1989 Loma Prieta Earthquake, and before the final retrofit strategy was determined for the East Span, Caltrans completed an interim retrofit of the existing bridge to prevent a catastrophic collapse of the bridge should a similar earthquake occur before the East Span was completely replaced. The interim retrofit was performed under two separate contracts that lengthened pier seats, added some structural members, and strengthened areas of the bridge so they would be more resilient during an earthquake.

Existing East Span of the San Francisco-Oakland Bay Bridge

Stormwater Treatment Measures

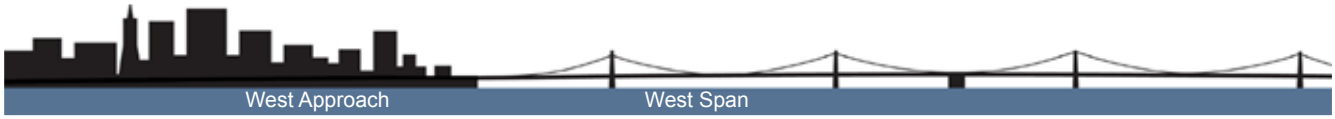
Contractor: Diablo Construction, Inc.

Approved Capital Outlay Budget: $18.3 M

Status: Completed December 2008

The Stormwater Treatment Measures contract implemented a number of best practices for the management and treatment of stormwater runoff. Focused on the areas around and approaching the toll plaza, the contract added new drainage and built new bio-retention swales and other related constructs.

Stormwater Retention Basin



Yerba Buena Island Substation

Contractor: West Bay Builders
Approved Capital Outlay Budget: $11.6 M
Status: Completed May 2005

This contract relocated an electrical substation just east of the Yerba Buena Island Tunnel in preparation for the new East Span.

Pile Installation Demonstration

Contractor: Manson and Dutra, Joint Venture
Approved Capital Outlay Budget: $9.2 M
Status: Completed December 2000

While large-diameter battered piles are common in offshore drilling, the new East Span is one of the first bridges to use them in its foundations. To minimize project risks and build industry knowledge, a pile installation demonstration project was initiated to prove the efficacy of the proposed technology and methodology. The demonstration was highly successful and helped result in zero contract change orders or claims for pile driving on the project.

I Existing Bridge Demolition

Contractor: TBD
Approved Capital Outlay Budget: $239.1 M
Status: In Design

Design work on the demolition of the existing bridge will start in earnest as the opening of the new bridge to traffic approaches. The current plan is to complete the environmental clearance by December 2011, obtain all permits by June 2012 and advertise and award the contract in January 2013. Demolition of the existing bridge is scheduled to begin immediately after the new bridge is opened to traffic in 2013.

New YBI Electrical Substation

J Electrical Cable Relocation

Contractor: Manson Construction
Approved Capital Outlay Budget: $9.6 M
Status: Completed January 2008

A submerged cable from Oakland that is close to where the new bridge will touch down supplies electrical power to Treasure Island. To avoid any possible damage to the cable during construction, two new replacement cables were run from Oakland to Treasure Island. The extra cable was funded by the Treasure Island Development Authority.

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Antioch Bridge Seismic Retrofit Project

Contractor: California Engineering Contractors, Inc.
Approved Capital Outlay Budget: $70.0 M
Status:40% Complete as of April 2011

Serving the Delta region of the Bay Area, the Antioch Bridge takes State Route 160 traffic over the San Joaquin River, linking eastern Contra Costa County with Sacramento County. The current 1.8-mile-long steel plate girder bridge was opened in 1978 with one lane in each direction. The major retrofit measure for the bridge includes installing seismic isolation bearings at each of the 41 piers, strengthening piers 12 through 31 with steel cross-bracing between column bents, and installing steel casings at all columns located at the Sherman Island approach slab bridge.

Status: The isolation bearing fabrication and installation process is ongoing with 13 of the 41 piers completed in the field. The cross-bracing fabrication and installation are also ongoing with 8 of the twenty piers completed. All 116 column casings have been fabricated and are scheduled to be erected at the end of June. In addition to the retrofit work, comprehensive bird and environmental monitoring continues successfully. Reinforcement for concrete pedestals is also ongoing with 4 of the 20 piers completed.

Pier 33 Bearing Installation

Column Steel Casings

Piers 30 Pedestal Pour

Dumbarton Bridge Seismic Retrofit Project

Contractor: Shimmick Construction Company, Inc.

Approved Capital Outlay Budget: $92.7 M

Status: 16% Complete as of April 2011

The current Dumbarton Bridge was opened to traffic in 1982 linking the cities of Newark in Alameda County and East Palo Alto in San Mateo County. The 1.6-mile long bridge has six lanes (three in each direction) and an eight-foot bicycle/pedestrian pathway. The bridge is a combination of three bridge types; reinforced concrete slab approaches supported on multiple pile extension columns, precast-prestressed concrete delta girders and steel box girders supported on reinforced concrete piers. The current retrofit strategy for the bridge includes superstructure and deck modifications and installation of isolation bearings.

Status: The bent cap extensions located along the west trestle slabs are ongoing and are at various stages of work. Work involves removal and replacement of curtain walls, pile installation, and casting of concrete columns. Foundations for the bent cap extensions have been completed at the east trestle slabs. The excavation for the pump station has been completed and piles driven and reinforcing steel placed for the foundation mat is ongoing.

Traffic operating system (TOS) fiber circuitry, removal of cathodic protection and relocation of transformers and lighting conduits are ongoing along the entire length of the bridge. Relocation of the control center is complete.

Temporary access platforms necessary for the widening of the pier bent caps and installation of the isolation bearings have been completed at piers 16 through 18. Fabrication and installation of access platforms is in progress at piers 19 through 23.

Core drilling has begun at pier 17 and additional reinforcing steel will be installed through the core holes widening the bent cap by two feet on each side.

Jacking frame fabrication is underway for pier 16. The existing pier cross frames (Piers 16 – 31) within the box girders required major modifications, allowing the superstructure to be jacked vertically by approximately five inches so new isolation bearings can be installed. The first two of 32 deck access openings has been completed.

Dumbarton Bridge

Core Drilling through Bent Cap

Falsework for Approach Spans Bent Cap Expansion

Layout of Rail Transport System to Deliver Construction Materials Along Box Girder

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Other Completed Projects

In the 1990s, the State Legislature identified seven of the nine state-owned toll bridges for seismic retrofit. In addition to the San Francisco-Oakland Bay Bridge, these included the Benicia-Martinez, Carquinez, Richmond-San Rafael and San Mateo-Hayward bridges in the Bay Area, and the Vincent Thomas and Coronado bridges in Southern California. Other than the East Span of the Bay Bridge, the retrofits of all of the bridges have been completed as planned.

High-Rise Section of San Mateo-Hayward Bridge

San Mateo-Hayward Bridge Seismic Retrofit Project
Project Status: Completed 2000

The San Mateo-Hayward Bridge seismic retrofit project focused on strengthening the high-rise portion of the span. The foundations of the bridge were significantly upgraded with additional piles.

1958 Carquinez Bridge (foreground) with the 1927 Span (middle) under Demolition and the New Alfred Zampa Memorial Bridge (background)

1958 Carquinez Bridge Seismic Retrofit Project
Project Status: Completed 2002

The eastbound 1958 Carquinez Bridge was retrofitted in 2002 with additional reinforcement of the cantilever thru-truss structure.

1962 Benicia-Martinez Bridge Seismic Retrofit Project
Project Status: Completed 2003

The southbound 1962 Benicia-Martinez Bridge was retrofitted to “Lifeline” status with the strengthening of the foundations and columns and the addition of seismic bearings that allow the bridge to move during a major seismic event. The Lifeline status means the bridge is designed to sustain minor to moderate damage after a seismic event and to reopen quickly to emergency response traffic.

1962 Benicia-Martinez Bridge (right)

Richmond-San Rafael Bridge Seismic Retrofit Project
Project Status: Completed 2005

The Richmond-San Rafael Bridge was retrofitted to a "No Collapse" classification to avoid catastrophic failure during a major seismic event. The foundations, columns, and truss of the bridge were strengthened, and the entire low-rise approach viaduct from Marin County was replaced.

Richmond-San Rafael Bridge

Los Angeles-Vincent Thomas Bridge Seismic Retrofit Project
Project Status: Completed 2000

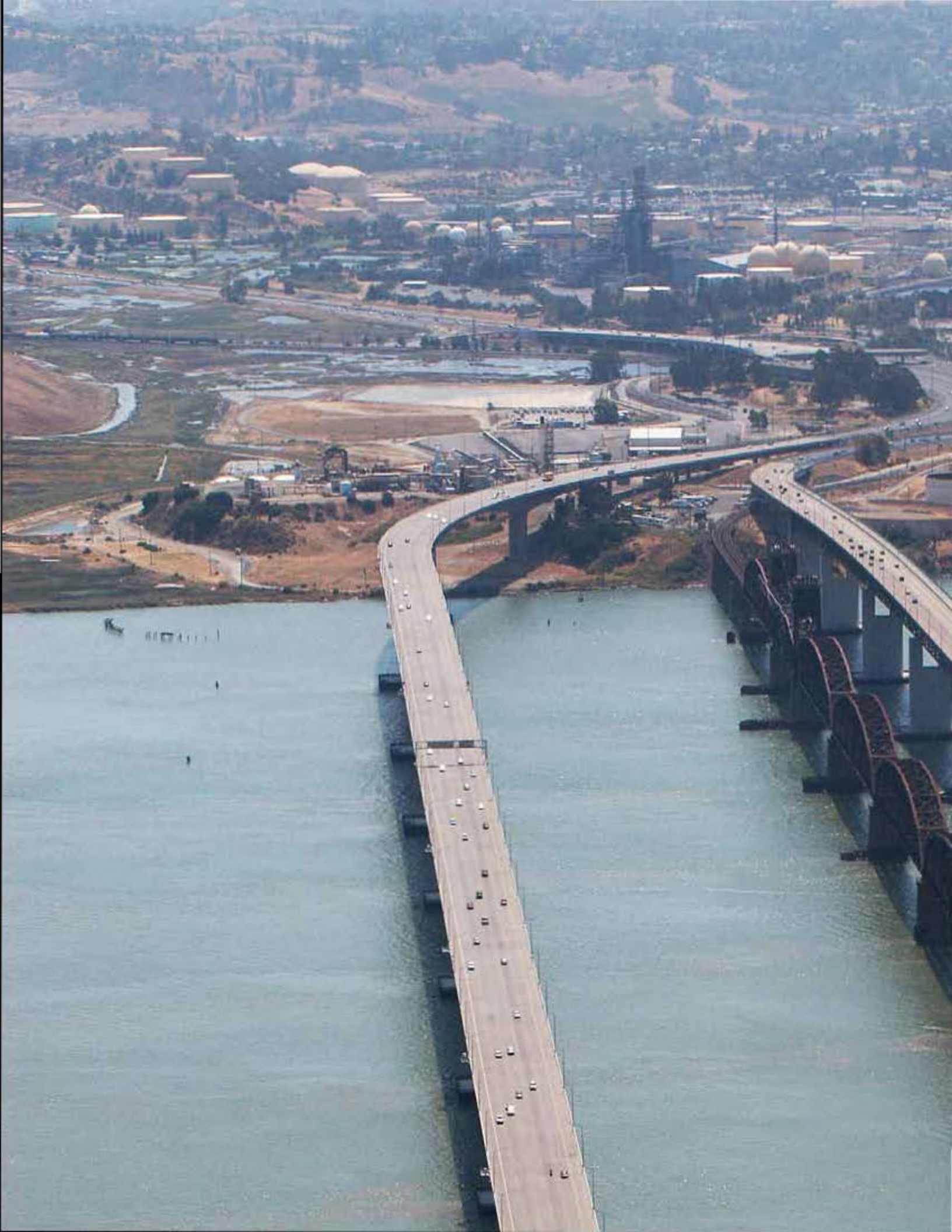
The Vincent Thomas Bridge is a 1,500-foot long suspension bridge crossing the Los Angeles Harbor in Los Angeles that links San Pedro with Terminal Island. The bridge was one of two state-owned toll bridges in Southern California (the other being the San Diego-Coronado Bridge). Opened in 1963, the bridge was seismically retrofitted as part of the TBSRP in 2000.

Los Angeles-Vincent Thomas Bridge

San Diego-Coronado Bridge Seismic Retrofit Project
Project Status: Completed 2002

The San Diego-Coronado Bridge crosses over San Diego Bay and links the cities of San Diego and Coronado. Opened in 1969, the 2.1-mile long bridge was seismically retrofitted as part of the Toll Bridge Seismic Retrofit Project in 2002.

San Diego-Coronado Bridge



Benicia-Martinez Bridge

REGIONAL MEASURE 1 TOLL BRIDGE PROGRAM

REGIONAL MEASURE 1 PROGRAM

Interstate 880/State Route 92 Interchange Reconstruction Project
Project Status: In Construction

The Interstate 880/State Route 92 Interchange Reconstruction Project is the final project under the Regional Measure 1 Toll Bridge Program. Project completion fulfills a promise made to Bay Area voters in 1988 to deliver a slate of projects that help expand bridge capacity and improve safety on the bridges.

Gore Area Concrete Paving in Progress and Southbound 880

Interstate 880/State Route 92 Interchange Reconstruction Contract

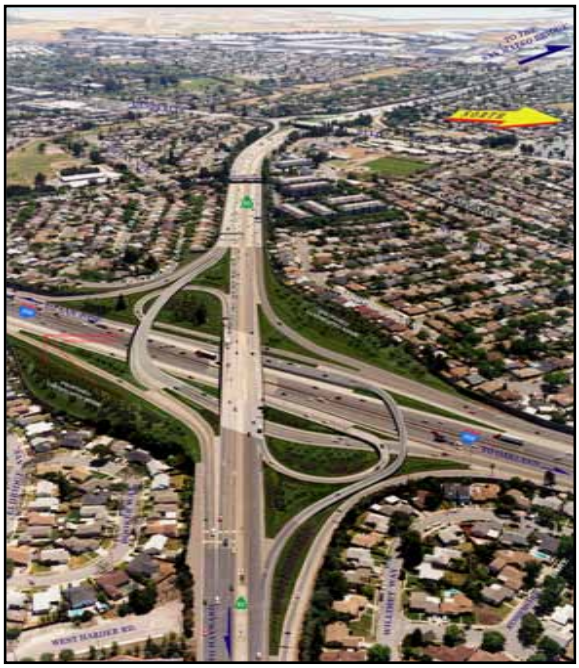
Contractor: Flatiron/Granite

Approved Capital Outlay Budget: $161.0 M

Status: 87% Complete as of April 2011

This corridor is consistently one of the Bay Area's most congested during the evening commute. This is due in part to the lane merging and weaving that is required by the existing cloverleaf interchange. The new interchange will feature direct freeway-to-freeway connector ramps that will increase traffic capacity and improve overall safety and traffic operations in the area. With the new direct-connector ramps, drivers coming off of the San Mateo-Hayward Bridge can access Interstate 880 without having to compete with traffic headed onto east Route 92 from south Interstate 880 (see progress photos on pages 80 and 81).

Aerial View of Construction Progress



Future Interstate 880/State Route 92 Interchange (as simulated) Looking West toward San Mateo

Stage 1 – Construct East Route 92 to North Interstate 880 Connector

The new east Route 92 to north Interstate 880 connector (ENCONN) is the most critical fly-over structure for relieving congestion in the corridor. The ENCONN will be first used as a detour to allow for future stages of work, while keeping traffic flowing.

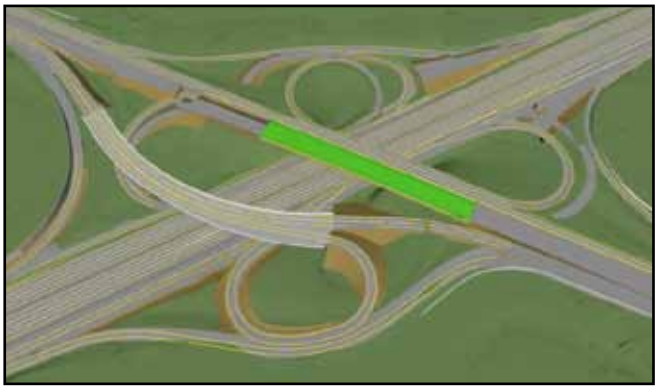
Status: ENCONN was completed and opened to detour traffic on May 16, 2009.

Stage 1 - Construct East Route 92 to North Interstate 880 Direct Connector

Stage 2 – Replace South Side of Route 92 Separation Structure

By detouring eastbound Route 92 traffic onto ENCONN, the existing separation structure that carries SR92 over I-880 can be replaced. The existing structure will be cut lengthwise, and then demolished and replaced separately. In this stage, the south side of the structure will be replaced, while west Route 92 and south Interstate 880 to east Route 92 traffic will stay on the remaining structure.

Status: Work on the south side of the separation structure is complete.



Stage 2 - Demolish and Replace South Side of Route 92 Separation Structure

Stage 3 – Replace North Side of Route 92 Separation Structure

Upon completion of Stage 2, the existing north side of the separation structure will be demolished and replaced. Its traffic will then be shifted onto the newly reconstructed south side.

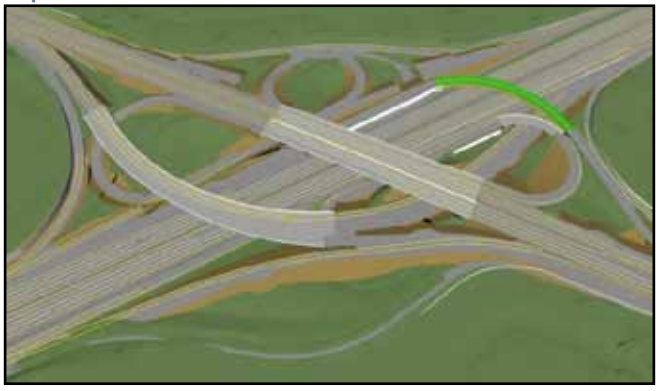
Status: The north side of the structure opened to traffic in February 2011.

Stage 3 - Demolish and Replace North Side of Route 92 Separation Structure

Stage 4 – Final Realignment and Other Work

In addition to ENCONN and the separation structure, direct north 880 to west 92 connector (NWCONN) and west 92 to south 880 connector (WSCONN) remain to be completed. The new Eldridge Avenue pedestrian overcrossing is now complete.

Status: The NWCONN structure opened to traffic in October 2010. The WSCONN structure is scheduled to be fully opened in June 2011, and will be followed soon after by the opening of the ENCONN structure in its final alignment in July 2011.



Stage 4 - Final Realignment and Other Work

REGIONAL MEASURE 1 PROGRAM
Other Completed Projects

San Mateo-Hayward Bridge-Widening Project
Project Status: Completed 2003

This project expanded the low-rise concrete trestle section of the San Mateo-Hayward Bridge to allow for three lanes in each direction to match the existing configuration of the high-rise steel section of the bridge.

Widening of the San Mateo-Hayward Bridge Trestle on Left

Richmond-San Rafael Bridge Rehabilitation Projects
Project Status: Completed 2006

Two major rehabilitation projects for the Richmond-San Rafael Bridge were funded and completed: (1) replacement of the western concrete approach trestle and ship-collision protection fender system; and (2) rehabilitation of deck joints and resurfacing of the bridge deck.

In 2005, along with the seismic retrofit of the bridge, the trestle and fender replacement work was completed as part of the same project. Under a separate contract in 2006, the bridge was resurfaced with a polyester concrete overlay along with the repair of numerous deck joints.

New Richmond-San Rafael Bridge West Approach Trestle under Construction

Richmond Parkway Construction Project
Project Status: Completed 2001

The final connections to the Richmond Parkway from Interstate 580 near the Richmond-San Rafael Bridge were completed in May 2001.

New Alfred Zampa Memorial (Carquinez) Bridge Project
Project Status: Completed 2003

New Alfred Zampa Memorial (Carquinez) Bridge Soon after Opening to Traffic, with Crockett Interchange Still under Construction

The new western span of the Carquinez Bridge, which replaced the original 1927 span, is a twin-towered suspension bridge with three mixed-flow lanes, a new carpool lane, shoulders and a bicycle/pedestrian pathway.

Benicia-Martinez Bridge Project
Project Status: Completed 2009

Benicia-Martinez Bridge Bicycle/Pedestrian Pathway Opened to the Public in August 2009

A two-year project to rehabilitate and reconfigure the original Benicia-Martinez Bridge began shortly after the opening of the new Congressman George Miller Bridge. The existing 1.2-mile roadway surface on the steel deck truss bridge was modified to carry four lanes of southbound traffic (one more than before)—with shoulders on both sides—plus a bicycle/pedestrian path on the west side of the span that connects to Park Road in Benicia and to Marina Vista Boulevard in Martinez. Reconstruction of the east side of the bridge and approaches was completed in August 2008. Reconstruction of the west side of the bridge and its approaches and construction of the bicycle/pedestrian pathway were completed in August 2009.

Bayfront Expressway (State Route 84) Widening Project
Project Status: Completed 2004

This project expanded and improved the roadway from the Dumbarton Bridge touchdown to the US 101/ Marsh Road interchange by adding additional lanes and turn pockets and improving bicycle/pedestrian access in the area.

APPENDICES

Inside the Tower Grillage Being Lowered into Position on top of Lift Four of the Tower

Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2011 ($ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (03/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
SFOBB East Span Replacement Project						
Capital Outlay Support	959.3	218.0	1,177.3	941.9	1,295.9	118.6
Capital Outlay Construction	4,492.2	580.0	5,072.2	3,842.9	5,150.5	78.3
Other Budgeted Capital	35.1	(3.3)	31.8	0.7	7.7	(24.1)
Total	**5,486.6**	**794.7**	**6,281.3**	**4,785.5**	**6,454.1**	**172.8**
SFOBB West Approach Replacement						
Capital Outlay Support	120.0	(2.0)	118.0	118.0	118.5	0.5
Capital Outlay Construction	309.0	41.7	350.7	328.5	338.1	(12.6)
Total	**429.0**	**39.7**	**468.7**	**446.5**	**456.6**	**(12.1)**
SFOBB West Span Retrofit						**-**
Capital Outlay Support	75.0	(0.2)	74.8	74.9	74.8	-
Capital Outlay Construction	232.9	(5.5)	227.4	227.4	227.4	-
Total	**307.9**	**(5.7)**	**302.2**	**302.3**	**302.2**	**-**
Richmond-San Rafael Bridge Retrofit						
Capital Outlay Support	134.0	(7.0)	127.0	126.8	127.0	-
Capital Outlay Construction	780.0	(90.5)	689.5	667.5	689.5	-
Total	**914.0**	**(97.5)**	**816.5**	**794.3**	**816.5**	**-**
Benicia-Martinez Bridge Retrofit						-
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
Total	**177.8**	**-**	**177.8**	**177.8**	**177.8**	**-**
Carquinez Bridge Retrofit						
Capital Outlay Support	28.7	0.1	28.8	28.8	28.8	-
Capital Outlay Construction	85.5	(0.1)	85.4	85.4	85.4	-
Total	**114.2**	**-**	**114.2**	**114.2**	**114.2**	**-**
San Mateo-Hayward Retrofit						**-**
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	(0.1)	135.3	135.3	135.3	-
Total	**163.5**	**(0.1)**	**163.4**	**163.4**	**163.4**	**-**
Vincent Thomas Bridge Retrofit (Los Angeles)						
Capital Outlay Support	16.4	-	16.4	16.4	16.4	-
Capital Outlay Construction	42.1	(0.1)	42.0	42.0	42.0	-
Total	**58.5**	**(0.1)**	**58.4**	**58.4**	**58.4**	**-**
San Diego-Coronado Bridge Retrofit						
Capital Outlay Support	33.5	(0.3)	33.2	33.2	33.2	-
Capital Outlay Construction	70.0	(0.6)	69.4	69.4	69.4	-
Total	**103.5**	**(0.9)**	**102.6**	**102.6**	**102.6**	**-**

Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2011 ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (03/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Antioch Bridge						
Capital Outlay Support	-	31.0	31.0	12.6	35.3	4.3
Capital Outlay Support by BATA				6.2		
Capital Outlay Construction	-	70.0	70.0	19.7	60.5	(9.5)
Total	**-**	**101.0**	**101.0**	**38.5**	**95.8**	**(5.2)**
Dumbarton Bridge						
Capital Outlay Support	-	56.0	56.0	19.3	56.0	-
Capital Outlay Support by BATA				6.0		
Capital Outlay Construction	-	92.7	92.7	9.5	92.5	(0.2)
Total	**-**	**148.7**	**148.7**	**34.8**	**148.5**	**(0.2)**
Subtotal Capital Outlay Support	**1,433.1**	**295.6**	**1,728.7**	**1,450.3**	**1,852.1**	**123.4**
Subtotal Capital Outlay	**6,286.8**	**687.5**	**6,974.3**	**5,567.3**	**7,030.3**	**56.0**
Subtotal Other Budgeted Capital	**35.1**	**(3.3)**	**31.8**	**0.7**	**7.7**	**(24.1)**
Miscellaneous Program Costs	**30.0**	**-**	**30.0**	**25.5**	**30.0**	**-**
Subtotal Toll Bridge Seismic Retrofit Program	**7,785.0**	**979.8**	**8,764.8**	**7,043.8**	**8,920.1**	**155.3**
Net Programmatic Risks*	**-**	**-**	**-**	**-**	**8.6**	**8.6**
Program Contingency	**900.0**	**(582.8)**	**317.2**	**-**	**153.3**	**(163.9)**
Total Toll Bridge Seismic Retrofit Program [1]	**8,685.0**	**397.0**	**9,082.0**	**7,043.8**	**9,082.0**	**-**

[1] Figures may not sum up to totals due to rounding effects.

Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2011 ($ Millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and Encumbrances as of April 2011 see Note (1)	Estimated costs not yet spent or Encumbered as of April 2011	Total Forecast as of April 2011
a	b	c	d	e	f = d + e
Other Completed Projects					
Capital Outlay Support	144.9	144.6	144.6	-	144.6
Capital Outlay	472.6	471.9	472.6	(0.8)	471.8
Total	**617.5**	**616.5**	**617.2**	**(0.8)**	**616.4**
Richmond-San Rafael					
Capital Outlay Support	134.0	127.0	126.8	0.2	127.0
Capital Outlay	698.0	689.5	674.1	15.4	689.5
Project Reserves	82.0	-	-	-	-
Total	**914.0**	**816.5**	**800.9**	**15.6**	**816.5**
West Span Retrofit					
Capital Outlay Support	75.0	74.8	74.8	-	74.8
Capital Outlay	232.9	227.4	232.9	(5.5)	227.4
Total	**307.9**	**302.2**	**307.7**	**(5.5)**	**302.2**
West Approach					
Capital Outlay Support	120.0	118.0	118.4	0.1	118.5
Capital Outlay	309.0	350.7	345.4	(7.3)	338.1
Total	**429.0**	**468.7**	**463.8**	**(7.2)**	**456.6**
SFOBB East Span - Skyway					
Capital Outlay Support	197.0	181.2	181.3	(0.1)	181.2
Capital Outlay	1,293.0	1,254.1	1,345.5	(100.3)	1,245.2
Total	**1,490.0**	**1,435.3**	**1,526.8**	**(100.4)**	**1,426.4**
SFOBB East Span - SAS - Superstructure					
Capital Outlay Support	214.6	375.5	317.6	158.6	476.2
Capital Outlay	1,753.7	2,046.8	2,045.9	39.2	2,085.1
Total	**1,968.3**	**2,422.3**	**2,363.5**	**197.8**	**2,561.3**
SFOBB East Span - SAS - Foundations					
Capital Outlay Support	62.5	37.6	37.6	-	37.6
Capital Outlay	339.9	307.3	309.3	(4.3)	305.0
Total	**402.4**	**344.9**	**346.9**	**(4.3)**	**342.6**
Small YBI Projects					
Capital Outlay Support	10.6	10.6	10.2	0.4	10.6
Capital Outlay	15.6	15.6	15.5	0.2	15.7
Total	**26.2**	**26.2**	**25.7**	**0.6**	**26.3**
YBI Detour					
Capital Outlay Support	29.5	90.7	87.2	3.0	90.2
Capital Outlay	131.9	492.8	493.6	(10.8)	482.8
Total	**161.4**	**583.5**	**580.8**	**(7.8)**	**573.0**
YBI- Transition Structures					
Capital Outlay Support	78.7	106.4	45.9	70.2	116.1
Capital Outlay	299.4	238.5	128.0	172.0	300.0
Total	**378.1**	**344.9**	**173.9**	**242.2**	**416.1**

Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2011 ($ Millions) Cont.

Contract	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and Encumbrances as of April 2011 see Note (1)	Estimated Costs not yet spent or Encumbered as of April 2011	Total Forecast as of April 2011
a	b	c	d	e	f = d + e
Oakland Touchdown					
Capital Outlay Support	74.4	108.9	86.8	29.2	116.0
Capital Outlay	283.8	339.0	216.9	117.9	334.8
Total	**358.2**	**447.9**	**303.7**	**147.1**	**450.8**
East Span Other Small Projects					
Capital Outlay Support	212.3	206.5	198.1	8.5	206.6
Capital Outlay	170.8	170.8	118.4	36.2	154.6
Total	**383.1**	**377.3**	**316.5**	**44.7**	**361.2**
Existing Bridge Demolition					
Capital Outlay Support	79.7	59.9	0.4	61.0	61.4
Capital Outlay	239.2	239.1	-	234.9	234.9
Total	**318.9**	**299.0**	**0.4**	**295.9**	**296.3**
Antioch Bridge					
Capital Outlay Support	-	31.0	12.7	16.4	29.1
Capital Outlay Support by BATA			6.2	-	6.2
Capital Outlay	-	70.0	47.2	13.3	60.5
Total	**-**	**101.0**	**66.1**	**29.7**	**95.8**
Dumbarton Bridge					
Capital Outlay Support	-	56.0	20.5	29.5	50.0
Capital Outlay Support by BATA			6.0	-	6.0
Capital Outlay	-	92.7	55.5	37.0	92.5
Total	-	**148.7**	**82.0**	**66.5**	**148.5**
Miscellaneous Program Costs	**30.0**	**30.0**	**25.5**	**4.5**	**30.0**
Total Capital Outlay Support	**1,463.2**	**1,758.7**	**1,500.6**	**381.5**	**1,882.1**
Total Capital Outlay	**6,321.8**	**7,006.2**	**6,500.8**	**537.2**	**7,038.0**
Program Total [1]	**7,785.0**	**8,764.9**	**8,001.4**	**918.7**	**8,920.1**

(1). Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 06/07.
(2). BSA provided a distribution of program contingency in December 2004 based in Bechtel Infrastructure Corporation input. This Column is subject to revision upon completion of Department's risk assessment update.
(3) Total Capital Outlay Support includes program indirect costs.

[1] Figures may not sum up to totals due to rounding effects.

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2011 ($ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (03/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
San Francisco-Oakland Bay Bridge East Span Replacement Project						
East Span - SAS Superstructure						
Capital Outlay Support	214.6	160.9	375.5	301.6	476.2	100.7
Capital Outlay Construction	1,753.7	293.1	2,046.8	1,473.4	2,085.1	38.3
Total	**1,968.3**	**454.0**	**2,422.3**	**1,775.0**	**2,561.3**	**139.0**
SAS W2 Foundations						
Capital Outlay Support	10.0	(0.8)	9.2	9.2	9.2	-
Capital Outlay Construction	26.4	-	26.4	26.5	26.4	-
Total	**36.4**	**(0.8)**	**35.6**	**35.7**	**35.6**	**-**
YBI South/South Detour						
Capital Outlay Support	29.4	61.3	90.7	86.7	90.2	(0.5)
Capital Outlay Construction	131.9	360.9	492.8	465.7	482.8	(10.0)
Total	**161.3**	**422.2**	**583.5**	**552.4**	**573.0**	**(10.5)**
East Span - Skyway						
Capital Outlay Support	197.0	(15.8)	181.2	181.2	181.2	-
Capital Outlay Construction	1,293.0	(38.9)	1,254.1	1,237.0	1,245.2	(8.9)
Total	**1,490.0**	**(54.7)**	**1,435.3**	**1,418.2**	**1,426.4**	**(8.9)**
East Span - SAS E2/T1 Foundations						**-**
Capital Outlay Support	52.5	(24.1)	28.4	28.4	28.4	-
Capital Outlay Construction	313.5	(32.6)	280.9	274.8	278.6	(2.3)
Total	**366.0**	**(56.7)**	**309.3**	**303.2**	**307.0**	**(2.3)**
YBI Transition Structures (see notes below)						
Capital Outlay Support	78.7	27.7	106.4	43.9	116.1	9.7
Capital Outlay Construction	299.3	(60.8)	238.5	23.6	300.0	61.5
Total	**378.0**	**(33.1)**	**344.9**	**67.5**	**416.1**	**71.2**
*** YBI- Transition Structures**						
Capital Outlay Support			16.4	16.4	16.5	0.1
Capital Outlay Construction			-	-	-	-
Total			**16.4**	**16.4**	**16.5**	**0.1**
*** YBI- Transition Structures Contract No. 1**						
Capital Outlay Support			57.0	20.4	66.1	9.1
Capital Outlay Construction			176.2	23.6	228.8	52.6
Total			**233.2**	**44.0**	**294.9**	**61.7**
*** YBI- Transition Structures Contract No. 2**						
Capital Outlay Support			32.0	7.1	32.5	0.5
Capital Outlay Construction			59.0	-	67.9	8.9
Total			**91.0**	**7.1**	**100.4**	**9.4**
*** YBI- Transition Structures Contract No. 3 Landscape**						
Capital Outlay Support			1.0	-	1.0	-
Capital Outlay Construction			3.3	-	3.3	-
Total			**4.3**	**-**	**4.3**	**-**

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2011 ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (03/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Oakland Touchdown (see notes below)						
Capital Outlay Support	74.4	34.5	108.9	82.4	116.0	7.1
Capital Outlay Construction	283.8	55.2	339.0	210.5	334.8	(4.2)
Total	**358.2**	**89.7**	**447.9**	**292.9**	**450.8**	**2.9**
***OTD Prior-to-Split Costs**						
Capital Outlay Support			21.7	20.1	21.7	-
Capital Outlay Construction			-	-	-	-
Total			**21.7**	**20.1**	**21.7**	**-**
***OTD Submarine Cable**						
Capital Outlay Support			0.9	0.9	0.9	-
Capital Outlay Construction			9.6	7.9	9.6	-
Total			**10.5**	**8.8**	**10.5**	**-**
***OTD No.1 (Westbound)**						
Capital Outlay Support			47.3	50.8	50.5	3.2
Capital Outlay Construction			212.0	202.6	203.3	(8.7)
Total			**259.3**	**253.4**	**253.8**	**(5.5)**
***OTD No.2 (Eastbound)**						
Capital Outlay Support			22.5	9.9	26.4	3.9
Capital Outlay Construction			62.0	-	59.9	(2.1)
Total			**84.5**	**9.9**	**86.3**	**1.8**
*** Oakland Detour**						
Capital Outlay Support			15.0	-	15.0	-
Capital Outlay Construction			51.0	-	57.6	6.6
Total			**66.0**	-	**72.6**	**6.6**
***OTD Electrical Systems**						
Capital Outlay Support			1.5	0.8	1.5	-
Capital Outlay Construction			4.4	-	4.4	-
Total			**5.9**	**0.8**	**5.9**	**-**
Existing Bridge Demolition						
Capital Outlay Support	79.7	(19.8)	59.9	0.4	61.4	1.5
Capital Outlay Construction	239.2	(0.1)	239.1	-	234.9	(4.2)
Total	**318.9**	**(19.9)**	**299.0**	**0.4**	**296.3**	**(2.7)**
YBI/SAS Archeology						
Capital Outlay Support	1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction	1.1	-	1.1	1.1	1.1	-
Total	**2.2**	**-**	**2.2**	**2.2**	**2.2**	**-**
YBI - USCG Road Relations						
Capital Outlay Support	3.0	-	3.0	2.7	3.0	-
Capital Outlay Construction	3.0	-	3.0	2.8	3.0	-
Total	**6.0**	**-**	**6.0**	**5.5**	**6.0**	**-**
YBI - Substation and Viaduct						
Capital Outlay Support	6.5	-	6.5	6.4	6.5	-
Capital Outlay Construction	11.6	-	11.6	11.3	11.6	-
Total	**18.1**	**-**	**18.1**	**17.7**	**18.1**	**-**

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2011 ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (03/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Oakland Geofill						
Capital Outlay Support	2.5	-	2.5	2.5	2.5	-
Capital Outlay Construction	8.2	-	8.2	8.2	8.2	-
Total	**10.7**	**-**	**10.7**	**10.7**	**10.7**	**-**
Pile Installation Demonstration Project						
Capital Outlay Support	1.8	-	1.8	1.8	1.8	-
Capital Outlay Construction	9.3	(0.1)	9.2	9.2	9.3	-
Total	**11.1**	**(0.1)**	**11.0**	**11.0**	**11.1**	**-**
Stormwater Treatment Measures						
Capital Outlay Support	6.0	2.2	8.2	8.2	8.2	-
Capital Outlay Construction	15.0	3.3	18.3	16.7	18.3	-
Total	**21.0**	**5.5**	**26.5**	**24.9**	**26.5**	**-**
Right-of-Way and Environmental Mitigation						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay & Right-of-Way	72.4	-	72.4	51.3	80.4	8.0
Total	**72.4**	**-**	**72.4**	**51.3**	**80.4**	**8.0**
Sunk Cost - Existing East Span Retrofit						
Capital Outlay Support	39.5	-	39.5	39.5	39.5	-
Capital Outlay Construction	30.8	-	30.8	30.8	30.8	-
Total	**70.3**	**-**	**70.3**	**70.3**	**70.3**	**-**
Other Capital Outlay Support						
Environmental Phase	97.7	-	97.7	97.8	97.7	-
Pre-Split Project Expenditures	44.9	-	44.9	44.9	44.9	-
Non-project Specific Costs	20.0	(8.0)	12.0	3.2	12.0	-
Total	**162.6**	**(8.0)**	**154.6**	**145.9**	**154.6**	**-**
Subtotal Capital Outlay Support	**959.3**	**218.0**	**1,177.3**	**941.9**	**1,295.9**	**118.6**
Subtotal Capital Outlay Construction	**4,492.2**	**580.0**	**5,072.2**	**3,842.9**	**5,150.5**	**78.3**
Other Budgeted Capital	**35.1**	**(3.3)**	**31.8**	**0.7**	**7.7**	**(24.1)**
						-
Total SFOBB East Span Replacement Project [1]	**5,486.6**	**794.7**	**6,281.3**	**4,785.5**	**6,454.1**	**172.8**

[1] Figures may not sum up to totals due to rounding effects.

Appendix C: Regional Measure 1 Program Cost Detail ($ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (04/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
New Benicia-Martinez Bridge Project						
New Bridge						
Capital Outlay Support						
BATA Funding	84.9	7.2	92.1	91.9	92.1	-
Non-Bata Funding	-	0.1	0.1	0.1	0.1	-
Subtotal	84.9	7.3	92.2	92.0	92.2	-
Capital Outlay Construction			-			-
BATA Funding	661.9	94.6	756.5	753.8	756.5	-
Non-Bata Funding	10.1	-	10.1	10.1	10.1	-
Subtotal	672.0	94.6	766.6	763.9	766.6	-
Total	**756.9**	**101.9**	**858.8**	**855.9**	**858.8**	**-**
I-680/I-780 Interchange Reconstruction						
Capital Outlay Support						
BATA Funding	24.9	5.2	30.1	30.1	30.1	-
Non-Bata Funding	1.4	5.2	6.6	6.3	6.6	-
Subtotal	26.3	10.4	36.7	36.4	36.7	-
Capital Outlay Construction						
BATA Funding	54.7	26.9	81.6	77.1	81.6	-
Non-Bata Funding	21.6	-	21.6	21.7	21.7	0.1
Subtotal	76.3	26.9	103.2	98.8	103.3	0.1
Total	**102.6**	**37.3**	**139.9**	**135.2**	**140.0**	**0.1**
I-680/Marina Vista Interchange Reconstruction						
Capital Outlay Support	18.3	1.9	20.2	20.2	20.2	-
Capital Outlay Construction	51.5	4.9	56.4	56.1	56.4	-
Total	**69.8**	**6.8**	**76.6**	**76.3**	**76.6**	**-**
New Toll Plaza and Administration Building						
Capital Outlay Support	11.9	3.8	15.7	15.7	15.7	-
Capital Outlay Construction	24.3	2.0	26.3	25.1	26.3	-
Total	**36.2**	**5.8**	**42.0**	**40.8**	**42.0**	**-**
Existing Bridge & Interchange Modifications						
Capital Outlay Support						
BATA Funding	4.3	13.7	18.0	17.9	18.0	-
Non-Bata Funding	-	0.9	0.9	0.8	0.9	-
Subtotal	4.3	14.6	18.9	18.7	18.9	-
Capital Outlay Construction						
BATA Funding	17.2	32.8	50.0	37.2	50.0	-
Non-Bata Funding	-	9.5	9.5	-	9.5	-
Subtotal	17.2	42.3	59.5	37.2	59.5	-
Total	**21.5**	**56.9**	**78.4**	**55.9**	**78.4**	**-**
Other Contracts						
Capital Outlay Support	11.4	(0.9)	10.5	9.5	10.5	-
Capital Outlay Construction	20.3	3.3	23.6	18.4	23.6	-
Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
Total	**52.1**	**2.3**	**54.4**	**44.9**	**54.4**	**-**

Appendix C: Regional Measure 1 Program Cost Detail ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (04/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
New Benicia-Martinez Bridge Project continued...						
Subtotal BATA Capital Outlay Support	**155.7**	**30.9**	**186.6**	**185.3**	**186.6**	**-**
Subtotal BATA Capital Outlay Construction	**829.9**	**164.5**	**994.4**	**967.7**	**994.4**	**-**
Subtotal Capital Outlay Right-of-Way	**20.4**	**(0.1)**	**20.3**	**17.0**	**20.3**	**-**
Subtotal Non-BATA Capital Outlay Support	**1.4**	**6.2**	**7.6**	**7.2**	**7.6**	**-**
Subtotal Non-BATA Capital Outlay Construction	**31.7**	**9.5**	**41.2**	**31.8**	**41.3**	**0.1**
Project Reserves	**20.8**	**1.6**	**22.4**	**-**	**22.3**	**(0.1)**
Total New Benicia-Martinez Bridge Project	**1,059.9**	**212.6**	**1,272.5**	**1,209.0**	**1,272.5**	**-**
Notes:	**Includes EA's 00601_,00603_,00605_,00606_,00608_,00609_,0060A_,0060C_,0060E_, 0060F_,0060G_,0060H_, and all Project Right-of-Way**					
Carquinez Bridge Replacement Project						
New Bridge						
Capital Outlay Support	60.5	(0.3)	60.2	60.2	60.2	-
Capital Outlay Construction	253.3	2.7	256.0	255.9	256.0	-
Total	**313.8**	**2.4**	**316.2**	**316.1**	**316.2**	**-**
Crockett Interchange Reconstruction						
Capital Outlay Support	32.0	(0.1)	31.9	31.9	31.9	-
Capital Outlay Construction	73.9	(1.9)	72.0	71.9	72.0	-
Total	**105.9**	**(2.0)**	**103.9**	**103.8**	**103.9**	**-**
Existing 1927 Bridge Demolition						
Capital Outlay Support	16.1	(0.3)	15.8	15.7	15.8	-
Capital Outlay Construction	35.2	-	35.2	34.8	35.2	-
Total	**51.3**	**(0.3)**	**51.0**	**50.5**	**51.0**	**-**
Other Contracts						
Capital Outlay Support	15.8	0.9	16.7	16.4	16.7	-
Capital Outlay Construction	18.8	(1.2)	17.6	16.4	17.6	-
Capital Outlay Right-of-Way	10.5	(0.1)	10.4	9.9	10.4	-
Total	**45.1**	**(0.4)**	**44.7**	**42.7**	**44.7**	**-**
Subtotal BATA Capital Outlay Support	**124.4**	**0.2**	**124.6**	**124.2**	**124.6**	**-**
Subtotal BATA Capital Outlay Construction	**381.2**	**(0.4)**	**380.8**	**379.0**	**380.8**	**-**
Subtotal Capital Outlay Right-of-Way	**10.5**	**(0.1)**	**10.4**	**9.9**	**10.4**	**-**
Project Reserves	**12.1**	**(9.7)**	**2.4**	**-**	**2.4**	**-**
Total Carquinez Bridge Replacement Project [1]	**528.2**	**(10.0)**	**518.2**	**513.1**	**518.2**	**-**
Notes	**Other Contracts include EA's 01301_,01302_,01303_,01304_,01305_,01306_,01307_,01308_,01309_,0130A_,0130C_,0130D_,0130F_,0130G_,0130H_,0130J_,00453_,00493_,04700_,00607_,2A270_,and 29920_ and all Project Right-of-Way**					

[1] Figures may not sum up to totals due to rounding effects.

Appendix C: Regional Measure 1 Program Cost Detail ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (04/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Richmond-San Rafael Bridge Trestle. Fender, and Deck Joint Rehabilitation						
Capital Outlay Support						
BATA Funding	2.2	(0.8)	1.4	1.4	1.4	-
Non-BATA Funding	8.6	1.8	10.4	10.4	10.4	-
Subtotal	10.8	1.0	11.8	11.8	11.8	-
Capital Outlay Construction						
BATA Funding	40.2	(6.8)	33.4	33.3	33.4	-
Non-BATA Funding	51.1	-	51.1	51.1	51.1	-
Subtotal	91.3	(6.8)	84.5	84.4	84.5	-
Project Reserves	-	0.8	0.8	-	0.8	-
Total	**102.1**	**(5.0)**	**97.1**	**96.2**	**97.1**	**-**
Richmond-San Rafael Bridge Deck Overlay Rehabilitation						
Capital Outlay Support						
BATA Funding	4.0	(0.7)	3.3	3.3	3.3	-
Non-BATA Funding	4.0	(4.0)	-	-	-	-
Subtotal	8.0	(4.7)	3.3	3.3	3.3	-
Capital Outlay Construction	16.9	(0.6)	16.3	16.3	16.3	-
Project Reserves	0.1	0.3	0.4	-	0.4	-
Total	**25.0**	**(5.0)**	**20.0**	**19.6**	**20.0**	**-**
Richmond Parkway Project (RM 1 Share Only)						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	5.9	-	5.9	4.3	5.9	-
Total	**5.9**	**-**	**5.9**	**4.3**	**5.9**	**-**
San Mateo-Hayward Bridge Widening						
Capital Outlay Support	34.6	(0.5)	34.1	34.1	34.1	-
Capital Outlay Construction	180.2	(6.1)	174.1	174.1	174.1	-
Capital Outlay Right-of-Way	1.5	(0.9)	0.6	0.5	0.6	-
Project Reserves	1.5	(0.5)	1.0	-	1.0	-
Total	**217.8**	**(8.0)**	**209.8**	**208.7**	**209.8**	**-**
I-880/SR-92 Interchange Reconstruction						
Capital Outlay Support	28.8	35.8	64.6	58.7	64.6	-
Capital Outlay Construction						
BATA Funding	85.2	66.2	151.4	128.1	151.4	-
Non-BATA Funding	9.6	-	9.6	-	9.6	-
Subtotal	94.8	66.2	161.0	128.1	161.0	-
Capital Outlay Right-of-Way	9.9	7.0	16.9	12.4	16.9	-
Project Reserves	0.3	2.2	2.5	-	2.5	-
Total	**133.8**	**111.2**	**245.0**	**199.2**	**245.0**	**-**
Bayfront Expressway Widening						
Capital Outlay Support	8.6	(0.2)	8.4	8.3	8.4	-
Capital Outlay Construction	26.5	(1.5)	25.0	24.9	25.0	-
Capital Outlay Right-of-Way	0.2	-	0.2	0.2	0.2	-
Project Reserves	0.8	(0.3)	0.5	-	0.5	-
Total	**36.1**	**(2.0)**	**34.1**	**33.4**	**34.1**	**-**

Appendix C: Regional Measure 1 Program Cost Detail ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2011)	Cost to Date (04/2011)	Cost Forecast (04/2011)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
US 101/University Avenue Interchange Modification						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	3.8	-	3.8	3.7	3.8	-
Total	**3.8**	**-**	**3.8**	**3.7**	**3.8**	**-**
Subtotal BATA Capital Outlay Support	**358.3**	**64.7**	**423.0**	**415.3**	**423.0**	**-**
Subtotal BATA Capital Outlay Construction	**1,569.8**	**215.3**	**1,785.1**	**1,731.4**	**1,785.1**	**-**
Subtotal Capital Outlay Right-of-Way	**42.5**	**5.9**	**48.4**	**40.0**	**48.4**	**-**
Subtotal Non-BATA Capital Outlay Support	**14.0**	**4.0**	**18.0**	**17.6**	**18.0**	**-**
Subtotal Non-BATA Capital Outlay Construction	**92.4**	**9.5**	**101.9**	**82.9**	**102.0**	**0.1**
Project Reserves	**35.6**	**(5.6)**	**30.0**	**-**	**29.9**	**(0.1)**
Total RM1 Program	**2,112.6**	**293.8**	**2,406.4**	**2,287.2**	**2,406.4**	**-**

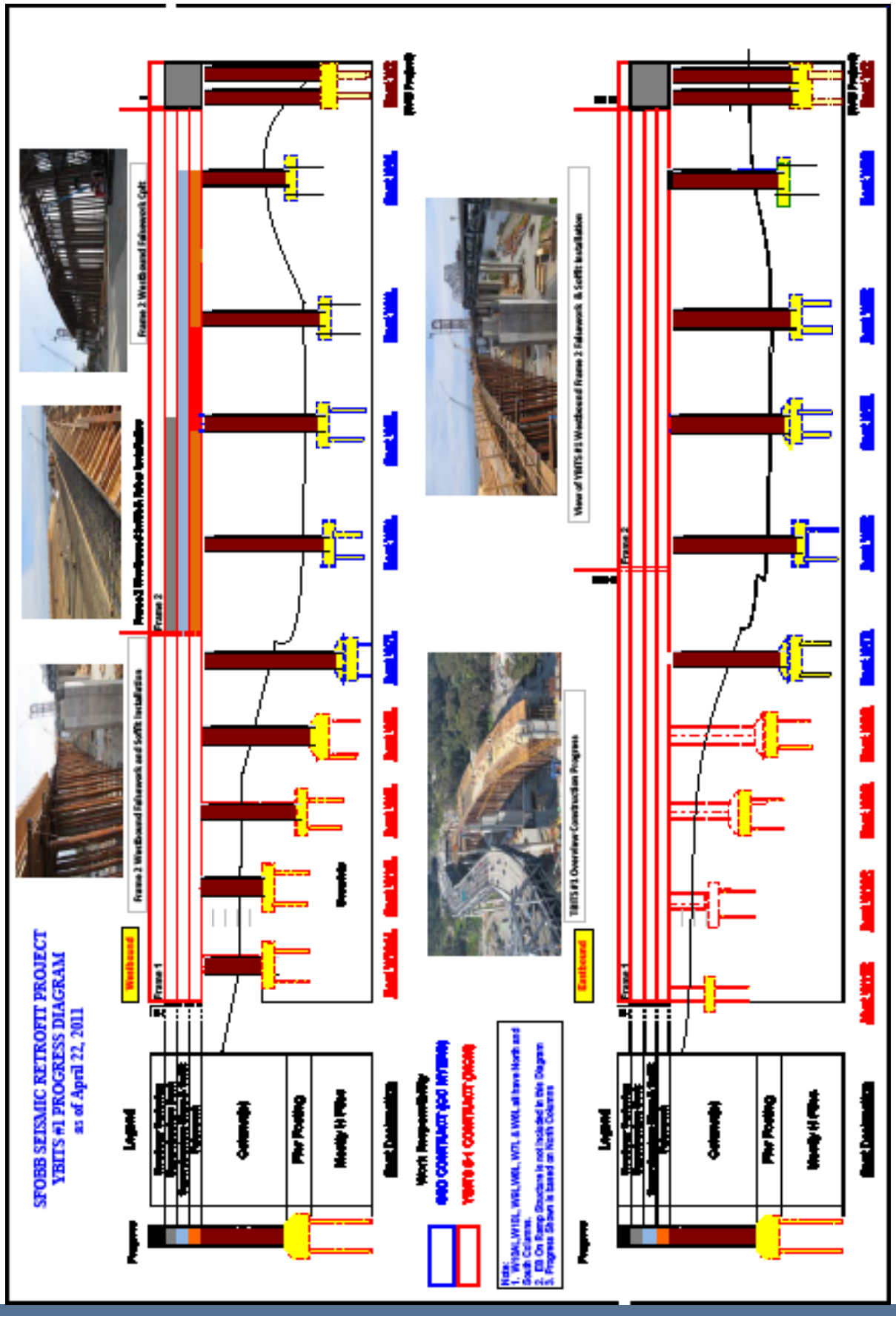
Notes:

1 Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRA Expenses for EA 0438U_ and 04157_

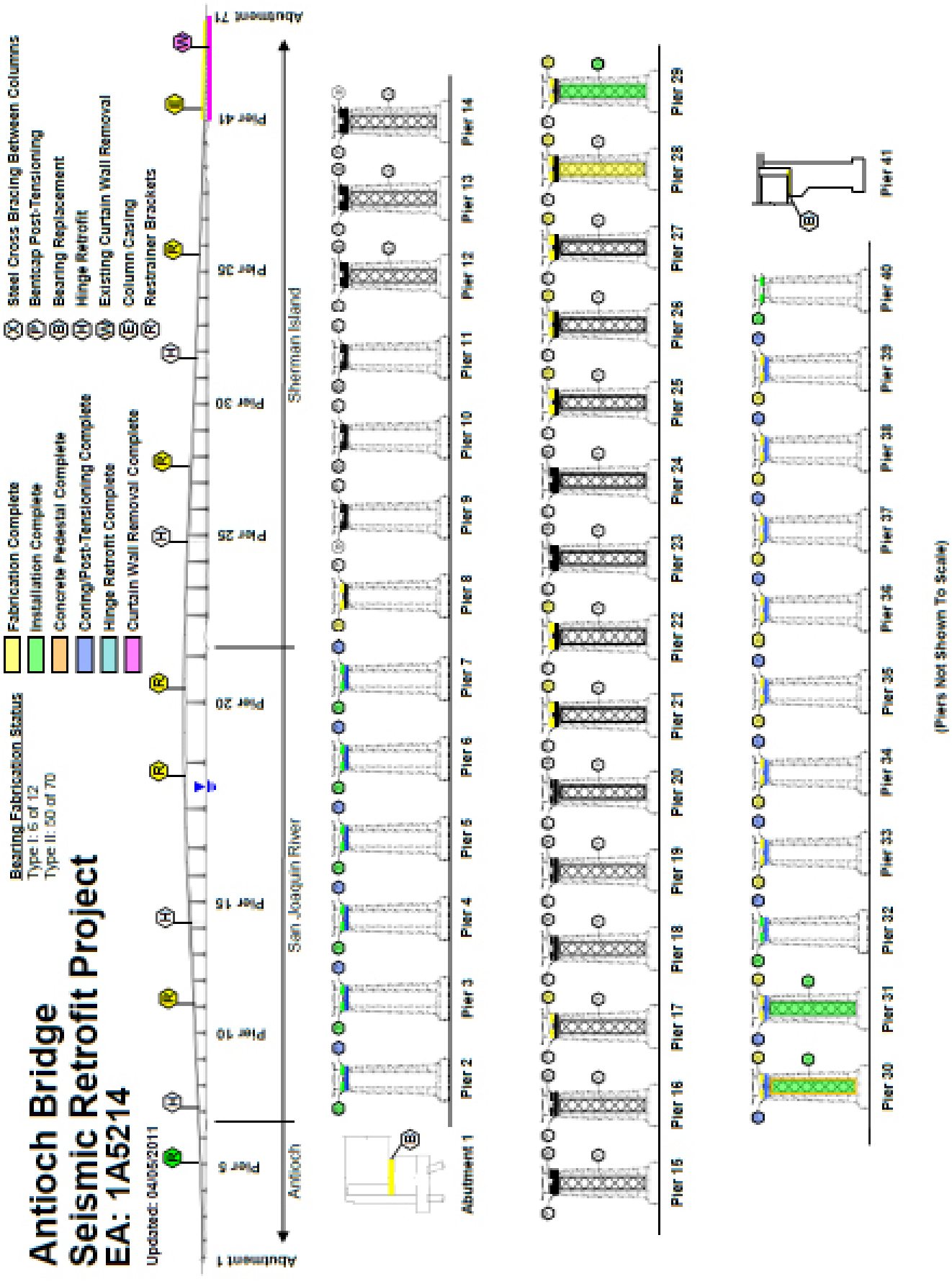
2 San Mateo-Hayward Bridge Widening includes EA's 00305_,04501_,04503_,04504_ ,04504_,04505_,04506_,04507_,04508_,04509_,27740_,27790_,04860_

Self-Anchored Suspension Bridge Tower Saddle

Appendix D: Progress Diagrams
Yerba Buena Island Transition Structures



Appendix D: Progress Diagrams (cont.)
Antioch Bridge



Project Photos

Self-Anchored Suspension Bridge Tower - Tower Facades installation at Elev. 135m

Appendix E: Project Progress Photographs

Self-Anchored Suspension Bridge Fabrication

Deck Panels for Roadway Box 14 - Last Deck Panels for Entire SAS Project

Roadway Box 12 Cable Brackett

Roadway Box 14 East

Roadway Box 12 and 13A Undergoing Trial Assembly

Saddle Being Set into Place on top of Tower

Appendix E: Project Progress Photographs

Self-Anchored Suspension Bridge Field Work

Lift 4 Tower Facades Installation at Elev. 135m

Tower Grillage Being Maneuvred over the Top of the Tower

Tower Grillage Being Lowered into Place

Appendix E: Project Progress Photographs

92/880 Interchange

Under Drain Installation in Progress along J-7 LIne

WSCONN Bridge Construction in Progress

Simulation of SR 880 Looking South

SR-92 Eldridge Avenue Pedestrian Over-Crossing

Appendix E: Project Progress Photographs

Antioch Bridge

Jacking Pins at Pier 33

Sole Plate Prior to Stainless Steel Sheet Installation

Appendix E: Project Progress Photographs

Dumbarton Bridge

Series of Bent Cap Extensions Ready for Casting of Concrete

Rail for Material Transporter Supported at Cross Frames within Box Girder

Appendix E: Project Progress Photographs

Oakland Detour

East Bay Municipal Utility District (EBMUD) Overcrossing North Abutment Wall

East Bay Municipal Utility District (EBMUD) Overcrossing Abutment Walls

Oakland Touchdown Detour Progress

Glossary of Terms

AB144/SB 66 BUDGET: The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005 and September 29, 2005, respectively.

BATA BUDGET: The planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

APPROVED CHANGES: For cost, changes to the AB144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

CURRENT APPROVED BUDGET: The sum of the AB144/SB66 Budget or BATA Budget and Approved Changes.

COST TO DATE: The actual expenditures incurred by the program, project or contract as of the month and year shown.

COST FORECAST: The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

AT COMPLETION VARIANCE or VARIANCE (cost): The mathematical difference between the Cost Forecast and the Current Approved Budget.

AB 144/SB 66 PROJECT COMPLETE BASELINE: The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

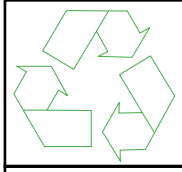
BATA PROJECT COMPLETE BASELINE: The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

PROJECT COMPLETE CURRENT APPROVED SCHEDULE: The sum of the AB144/SB66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

PROJECT COMPLETE SCHEDULE FORECAST: The current projected date for the completion of the program, project, or contract.

SCHEDULE VARIANCE or VARIANCE (schedule): The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

% COMPLETE: % Complete is based on an evaluation of progress on the project, expenditures to date, and schedule.



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The information in this report is provided in accordance with California Government code Section 755. This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) for the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production is $1,574,873.73.

URS Hatch Mott MacDonald
Bay Area Management Consultants
An Association of URS Corporation and Hatch Mott Macdonald

Self-Anchored Suspension Bridge - Tower Grillage in Place

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Brian Maroney, Deputy Toll Bridge Program Manager, Caltrans

RE: Agenda No. - 4a

Item- Program Issues
Demolition Contract

Recommendation:
APPROVAL

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
This memo will be sent under separate cover.

Attachment(s):

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Peter Siegenthaler, SAS Principal Construction Manager

RE: Agenda No. - 4b

Item- Program Issues
Architecture Issues (Top of Tower/Removal of False Suspender Cables and Cable Brackets

---

Recommendation:
APPROVAL

Cost:
Not to Exceed $10,000,000
Approximate Break-down:

1. Structural modifications - $3.5M - $5M
2. MEP Modifications - 0.25M - $0.5M
3. Elevator Modifications - $0.75M - $2.0M
4. Resource / Schedule Impacts - $2.0M - $3.0M

Schedule Impacts:
Impacts to resources, overtime, secondary cost impacts, compressed/accelerated schedule of other activities to accommodate this work is preliminary. The contractor estimates that the structural work will take two to three months to perform. Schedule impacts to the elevator installation are not known at this time. The FAVCO Crane is required to support the ongoing operations, which may push the time to doing this work to after load transfer. This may delay other critical path work that is required to achieve SSO (Seismic Safety Opening).

Discussion:
Staff requests approval to continue pursuing extending elevator/removal of the false suspender cables and cable brackets

Background:
At the May 5, TBPOC meeting, Clive Endress, presented alternative design solutions that would allow for the travel of the SAS tower elevator to continue to the top of the tower. TBPOC directed the team to study Cable Option #2, which would remove the false cable, and to provide further information regarding cost and schedule impacts.

General Design/Construction Scope (Cable Option #2):
Removal of the false cable will require the following:

1.) Removal of the existing cable brackets; two on the tower grillage, and two at the roadway level
2.) Elevator rails (tracks) will have to be extended to the top of the tower shafts, and a new platform (landing), screens, and safety railings will have to be designed and constructed.
3.) Elevator circuitry and controls will have to be modified to accommodate a new elevator stop. This will require development and approval of additional shop drawings. The application for a Division of Occupational Safety and Health (DOSH) permit will also have to be modified.

Architectural Enhancements:
The removal of the false suspender cable will provide an improved architectural appearance that is consistent with a suspension span design solution. Further it will clean up the top of the tower by removing the bracket and suspender cable.

Attachment(s):
Access to Tower Renditions

THE SAN FRANCISCO-OAKLAND BAY BRIDGE SEISMIC SAFETY PROJECTS

SFOBB ARCHITECTURAL ISSUES

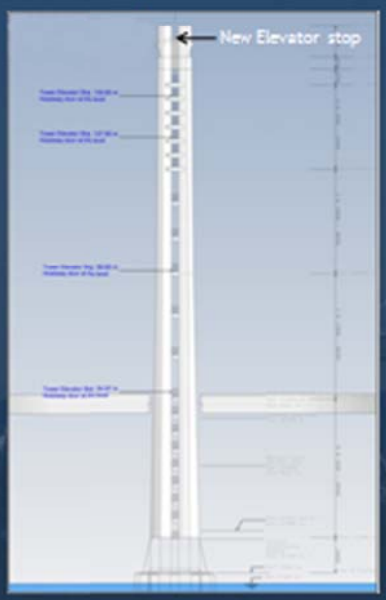
Top of Tower (Parapet Wall) As Planned

1

THE SAN FRANCISCO-OAKLAND BAY BRIDGE SEISMIC SAFETY PROJECTS

SFOBB ARCHITECTURAL ISSUES

Cable Option 2



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TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Bart Ney, Public Information Officer, Caltrans

RE: Agenda No. - 4c

Item- Program Issues
Tour Policy

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
This memo will be sent under separate cover.

Attachment(s):

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Tony Anziano, Toll Bridge Program Manager, Caltrans

RE: Agenda No. - 5a1

Item- San Francisco-Oakland Bay Bridge Updates
Self-Anchored Suspension (SAS) Span Update

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
A verbal update on the Self-Anchored Suspension (SAS) Span project will be provided at the June 2nd meeting.

Attachment(s):
N/A

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Tony Anziano, Toll Bridge Program Manager, Caltrans

RE: Agenda No. - 5b1

Item- San Francisco-Oakland Bay Bridge Updates
Yerba Buena Island Transition Structure (YBITS) No. 1 Update

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
A verbal update on the Yerba Buena Island Transition Structure (YBITS) No. 1 project will be provided at the June 2nd meeting.

Attachment(s):
N/A

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Brian Maroney, Deputy Toll Bridge Program Manager, Caltrans

Peter Lee, Senior Program Coordinator, BATA

RE: Agenda No. - 5b2

San Francisco-Oakland Bay Bridge Updates
Item- Yerba Buena Island Transition Structure (YBITS) No. 1
Fund Allocation

Recommendation:
APPROVAL
The PMT recommends that the TBPOC approve supplemental budget change of $13.2 million, including $9.3 million in TBSRP funds and $3.9 million in Toll Bridge Rehabilitation funds, to the Yerba Buena Island Transition Structures (YBITS) #1 contract for furnishing, installing and integrating various lighting, electrical, mechanical, piping, and BASE facilities along the YBI Transition Structure, the Skyway and the Oakland Touchdown structure of the new SFOBB east span. This budget change is consistent with the TBPOC's prior approval of the MEP implementation strategy.

Cost:
$13.2 million

Schedule Impacts:
N/A

Discussion:

Various portions of the mechanical, electrical and piping (MEP) utilities from the Skyway and OTD1 structures were deleted from those contracts in order to avoid having these utilities in place for up to 6 years while the remaining portions of the new SFOBB east span were being completed. It has now been determined that these deleted utilities shall be installed under the YBITS1 contract. The work includes installing State furnished light poles, furnishing and installing LED light fixtures and installing and upgrading other MEP facilities, including the BASE system.

Memorandum

At their November 2008 meeting, the Toll Bridge Program Oversight Committee (TBPOC) approved an MEP implementation strategy for the new east span at a total of $47.4 million. The scope of the approved work to be performed under the YBITS1 contract accounts for $30.7 million of the $47.4 million approved by the TBPOC with the balance of work to be performed under the SAS contract or separately through a BATA procurement contract. While a total of $30.7 million of MEP work will be performed, there is only a current additional funding need of $13.2 million for the contract due to remaining unallocated contract budget from a lower than estimated bid for the contract.

Total YBITS 1 Budget, including Oakland Detour and BASE System

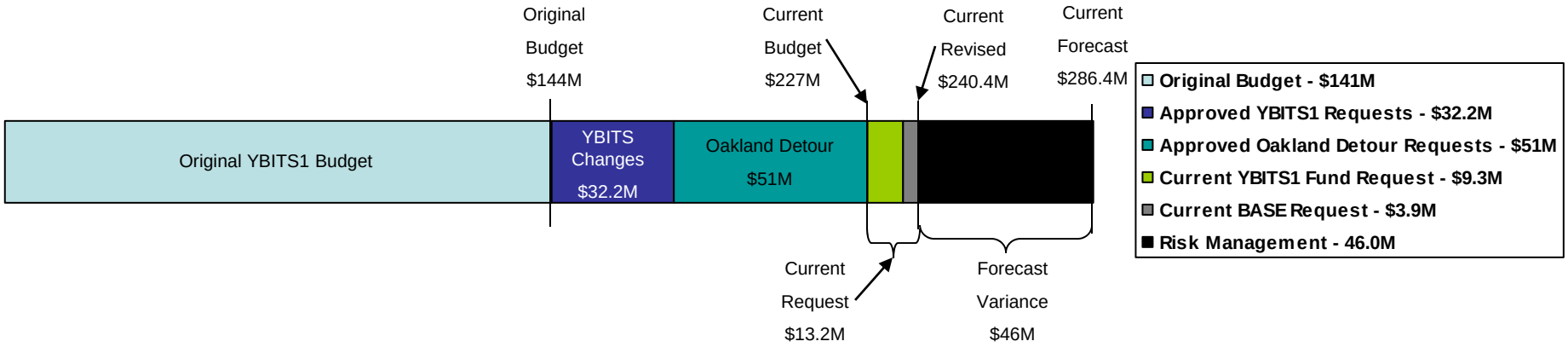
	Toll Bridge Seismic Retrofit		Toll Rehabilitation	Total Budget
	YBITS 1	OTD Detour	BASE System	
Budget Allocated at Award	$ 144,000,000			$ 144,000,000
1st Supplemental Budget Request	$ 32,200,000	$ 51,000,000		$ 83,200,000
2nd Supplemental Budget Request	$ 9,320,000		$ 3,900,000	$ 13,220,000
Total	**$ 185,520,000**	**$ 51,000,000**	**$ 3,900,000**	**$ 240,420,000**

Additional budget to be requested at the June TBPOC meeting is $9.32M from TBSR and $3.9M from Toll Rehabilitation for $30.74M worth of CCOs.

Attachment(s):

1. Budget Balance Beam
2. MEP Implementation Strategy

YBI Transition Structures 1 Contract 04-0120S4
(including Oakland Detour)
Budget and Forecast Comparison
June 1, 2011



Contract 04-0120S4 YBI Transition Structures 1
Current Contract Budget Funding Status
June 1, 2011

Contract Items	$	80,775,457
State Furnished Materials (SFM)	$	13,288,501
Subtotal	$	94,063,958
Supplemental Work	$	20,917,500
Contingency At 10%	$	11,498,542
Subtotal Original Contract Allotment	$	126,480,000
Unallocated Orignal Contract Budget	$	17,520,000
Subtotal Original Contract Budget	$	144,000,000
1st Supplemental Fund Request (Feb 11)	$	32,200,000
Oakland Detour (Feb 11)	$	51,000,000
Subtotal Current Contract Budget	$	227,200,000
2nd Supplemental Fund Request (Jun 11)	$	9,320,000
BASE System Funds (Toll Rehab) (Jun 11)	$	3,900,000
Total Revisedt Budget	$	240,420,000

Contract 04-0120S4 YBI Transition Structures 1
Contract Forecast At Completion (FAC) & Variance
(Reported 1st Quarter 2011 Forecast as of March 31, 2011)

Yerba Buena Island Transition Structures #1 Capital Outlay	$	228,800,000
Oakland Detour Capital Outlay	$	57,600,000
Total 1st Quarter 2011 Cost Forecast	$	286,400,000
Variance 1st Q 2011 Cost Forecast to Total Revised Budget	$	45,980,000

Quantitative Risk Analysis is ongoing.

SFOBB MEP Integration Strategy (CONFIDENTIAL) 5-2-2011

	Segregation of Work	Nov 2008 Estimated Cost	Current Estimated Cost	Executed Contracts / CCOs to date	Funds for SAS CCOs	Funds for YBITS-1 CCOs	Comments
A	**Furnish Light Poles (BATA Contract)**						
ITEM 1A	Furnish Light Poles	$15,300,000.00	$4,000,000.00	$3,000,000.00			The lowering device was eliminated. The fixtures were also eliminated from this contract and added to Item 1B below.
ITEM 2A	Storage Cost	$1,500,000.00	$500,000.00				
	Contingency (Included in the above)						
	Total Estimated Cost To Furnish Light Poles (BATA Contract)	**$16,800,000.00**	**$4,500,000.00**	**$3,000,000.00**			
B	**MEP Integration Work Installation**						
ITEM 1B	Install Light Poles (Skyway and OTD1), F&I LED fixture for corridor poles	$2,000,000.00	$13,500,000.00	**Pending Approval**	**$260,000.00**	$13,240,000.00	Fixtures were eliminated from pole contract and added to this item, also added more fixtures. CCO 902 (YBITS) and 167-S1 (SAS) to cover this item.
ITEM 2B	Installation of MEP items eliminated from Skyway & OTD1	$8,000,000.00	$8,000,000.00	$5,000,000.00	$5,000,000.00	$3,000,000.00	
ITEM 3B	Upgrades & Revisions of the already installed components (Skyway & OTD1)	$2,500,000.00	$2,500,000.00	**Pending Approval**	$1,700,000.00	$800,000.00	CCO 163 (pig tail conduits) is one of the issues for this item
ITEM 4B	Installation of BASE System (conduits & Cabinets within Skyway & OTD1)	$2,000,000.00	$0.00				This work is included in Item D below
ITEM 5B	Contingency	$2,900,000.00	$4,800,000.00		$1,300,000.00	$4,400,000.00	
	Total Estimated Cost For Installation	**$17,400,000.00**	**$28,800,000.00**	**$5,000,000.00**			
	Total for all Light Poles & MEP Integration Work (within Skyway & OTD1)	**$34,200,000.00**	**$33,300,000.00**	**$8,000,000.00**			**Total of $34.2M for Items A & B was approved by TBPOC 11-**
C	**System Wide Testing (Entire Corridor)**						
ITEM 1C	System wide (Entire Corridor) testing, Relay Setting, SCADA development & commissioning	$3,000,000.00	$3,000,000.00				
ITEM 2C	Resolution of system wide testing issues (for entire corridor)	$1,500,000.00	$1,500,000.00				
ITEM 3C	Contingency (20%)	$900,000.00	$900,000.00				
	Total Estimated Cost Of System wide Testing	**$5,400,000.00**	**$5,400,000.00**		$0.00	$5,400,000.00	**$5.4M (TBPOC Approved May 6, 2010)**
D	**Complete BASE System (Entire Corridor)**						
ITEM 1D	Hardware (about 150 cameras, interface box and decoder for each camera / wiring)	$3,000,000.00	$3,000,000.00				
ITEM 2D	Installation cost (Camera & Hardware)	$1,500,000.00	$1,500,000.00				
ITEM 3D	New dedicated fiber line in both structures with 2 loops (installed)	$2,000,000.00	$2,000,000.00				
ITEM 4D	Contingency (20%)	$1,300,000.00	$1,300,000.00				
	Total Estimated Cost for BASE System	**$7,800,000.00**	**$7,800,000.00**		$3,900,000.00	$3,900,000.00	**Need to transfer funds from rehab for this work**
	Total for all above items (Including BATA Contract)	**$47,400,000.00**	**$46,500,000.00**		**$12,160,000.00**	**$30,740,000.00**	

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Brian Maroney, Deputy Toll Bridge Program Manager, Caltrans

RE: Agenda No. - 5c1
San Francisco-Oakland Bay Bridge Updates
Item- Oakland Touchdown (OTD) No. 2
Oakland Detour Update

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
A verbal update on the Oakland Detour project will be provided at the June 2nd meeting.

Attachment(s):
N/A

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Peter Lee, Senior Program Coordinator, BATA

RE: Agenda No. - 6a

Item- SFOBB Eye-bar Update

Recommendation:
Per a Department request BATA contracted with TYLin to:

1) independently evaluate the sufficiency of the current repair strategy,
2) assist in development of an 'off-the-shelf' repair strategy should an eyebar break in the future, and
3) explore mitigation strategies for excess movement of the eyebars.

In general, the first two assignments have been completed. On the exploration of additional mitigating strategies, there were three increasingly impactful mitigation proposals. The first to grind off micro-imperfections and to continue regular inspection of the eyebars was only recently implemented. The other two proposals involved addition of a tuned mass dampening system and/or supplemental eyebars. There was no support for the supplemental eyebar installation given the construction impacts, cost and schedule.

On the tuned mass dampening (TMD) system, staff is proposing the installation of prototype to test the potential of the system. For the prototype, additional instrumentation and monitoring needs to be installed on an eyebar chain to appropriately design and install the prototype. This work is expected to take four months from approval and could be completed as early as October 2011. With SSO approaching, staff has proposed that if the TMD were to be pursued, then the work should be performed by CCO on the YBITS1 contract. The estimated cost to get to a prototype TMD is $400,000.

Because a detailed understanding of the allowable stresses on existing span is needed for dismantling, staff has also proposed an investigation of the existing span to provide all contractors with as much knowledge as possible and avoid overstressing the 75 year old bridge during dismantling. The investigation would focus on the

eyebars and could be performed at the same time as the prototype TMD work. The estimated cost of the investigation is $3,000,000

Risks include potential challenges from other contractors to perform the work that has happened on another monitoring contract recently advertised.

Cost:
$3,400,000

Schedule Impacts:
N/A

Discussion:

On April 25, 2011, BATA, CT, CTC, and TYLin staff met to discuss the current status of work on the eyebars on the existing east span of the Bay Bridge. As noted in prior memorandum, the repaired eyebar is performing as designed and all eyebars continue to be regularly inspected by the Office of Structures Maintenance and Investigation.

Discussion centered on concluding the BATA funded and CT requested TYLin review efforts to date on the eyebar and whether further steps should be taken to design and install a prototype tuned mass dampener (TMD) for the long eyebar chains. Several action items were identified for staff to seek additional information and are discussed below:

- Electrical Power Supply Capacity on the Existing Structure – There is sufficient power to add additional instrumentation for the design of the TMD.
- Acoustic Monitoring Contract – Caltrans is still awaiting work from the courts on the lifting of the "desist work order" on the contract.
- Schedule – See Attached
- Estimated Cost of the Instrumentation and TMD
    - Instrumentation $250,000
    - Prototype TMD $100,000
    - Traffic Control for Installation (10 nights) $ 35,000

    Total (say) $400,000

A schedule is attached based on an authorization decision made on the first week of June on the MCM retrofit contract or on the acoustic monitoring contract assuming resolution of the court order.

Because a detailed understanding of the allowable stresses on existing span is needed for dismantling, staff has also proposed an investigation of the existing span to provide all contractors with as much knowledge as possible and avoid overstressing the 75 year old bridge during dismantling. The investigation would focus on the eyebars and could be performed at the same time as the prototype TMD work. The estimated cost of the investigation is $3,000,000.

Attachment(s):
Eyebar TMD Schedule

Eyebar TMD Schedule

No.			05/30/11 1	06/06/11 2	06/13/11 3	06/20/11 4	06/27/11 5	07/04/11 6	07/11/11 7	07/18/11 8	07/25/11 9	08/01/11 10	08/08/11 11	08/15/11 12	08/22/11 13	08/29/11 14	09/05/11 15	09/12/11 16	09/19/11 17	09/26/11 18	10/03/11 19	10/10/11 20	10/17/11 21	10/24/11 22	10/31/11 23	11/07/11 24	11/14/11 25	11/21/11 26	11/28/11 27	12/05/11 28	12/12/11 29	12/19/11 30	12/26/11 31	01/02/12 32	01/09/12 33	01/16/12 34	01/23/12 35	01/30/12 36	02/06/12 37
0	BATA-CT Review Go/No Go																																				
		Review - Authorize																																				
		Contracting																																				
1	Instrumentation for vibration testing																																				
		Fabrication																																				
		Installation																																				
		Collection and Processing of Data																																				
2	Prototype TMD																																				
		Design																																				
		Manufacture - Test - Ship																																				
		Install - Verify																																				
3	BATA-CT Review Go/No Go																																				
4	Production TMD (Total 64)																																				
		Manufacture - Test - Ship																																				
		Test Eyebar - Install TMD - Tune - Verify																																				

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 25, 2011

FR: Mike Forner, Principal Transportation Engineer, Caltrans

RE: Agenda No. - 7a

Item- Antioch and Dumbarton Bridge Seismic Retrofit Updates

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:

<u>Antioch Bridge:</u>

- Time Elapsed: 50% (This includes 97 day time extension given under CCO 6)
- Work Completed: 53%

Update of on-going field work is as follows:

- Suspended platform installation completed at 31 of 32 total piers.
- Stair tower installation completed at 22 of 34 total piers.
- Drill and Bond dowels completed at 10 of 20 total piers.
- Post-tensioning completed at 23 of 38 total piers.
- Jacking stiffeners completed at 23 of 41 total piers.
- Fabrication of seismic bearings completed for 56 of 82 total bearings.
- Installation of seismic bearings completed for 28 of 82 total bearings.
- Fabrication completed for 116 of the 116 total steel column casings.
- Cross bracing fabrication 56% complete.
- Cross bracing installed at 8 of 20 Piers
- 5 of 20 piers with concrete pedestals are complete.

Dumbarton Bridge:

- Time Elapsed: 30%
- Work Completed: 21%

There were some delays in starting the fabrication of the steel jacking frames due to the working drawings and welding changes. These changes will be addressed in the upcoming CCO 27. In this CCO, additional time will be granting which will reduce the % of time elapsed. In addition, the Contractor has been working on the access platforms that do not qualify for partial payments. Once this work is completed, the contractor will be working on other items that qualify for partial payments, which will increase the % completed.

Update of on-going field work is as follows:

- Jacking Frames working drawing status: Piers 17 and 18 approved, Pier 19 is under review and expected to be approved this week, Pier 20 has just been submitted.
- Jacking Frames fabrication status: Pier 17 completed and delivered to job site, Pier 18 fabricated and delivered to paint shop.
- Temporary access platforms at Piers 17 to 30 have been constructed.
- The installation of the first 20 of the 32 deck access openings is complete.
- The concrete coring operation (3" core holes, 76 per bent cap) for widening the caps at Piers 17 and 18 was completed last week and the operation moved to Pier 19.
- Contractor completed the installation of all piles/columns at the trestle bent caps and continued construction of the slabs to tie trestle columns to the existing bents.
- Pumping plant footing is complete. The contractor is forming the walls.
- Relocation of bridge lighting & TOS is ongoing.
- Relocating the lighting conduits that conflict with the access openings at the piers is ongoing.
- The 3 Peregrine falcon eggs at Pier 16 hatched on Monday May 23, 2011. They are expected to fledge in 4-5 weeks. No impacts on contractor's operation so far.

Attachment(s):
N/A

ITEM 8: OTHER BUSINESS

No Attachments